



FLIGHT

The
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ENGINEER
&
AIRSHIPS



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"FLIGHT" PHOTOGRAPHS.

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DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list :—

1927

June 2	....	R.A.F. Middle East Reunion Dinner (Trocaadero)
June 4	....	The Royal Tournament, Olympia
June 4-6	....	Bournemouth Whitsun Air Races.
June 4-16	....	Fourth International Aero Exhibition, Prague.
June 11	....	Newcastle Aero Club Flying Meeting
June 18	....	Inst.Ae.S. Visit to Croydon Aerodrome.
June 30	....	Aviation Ball at May Fair Hotel
July 2	....	Royal Air Force Display.
July 9	....	Air League Challenge Cup at Castle Bromwich, Birmingham.
July 30- Aug. 1	....	Bournemouth Meeting (including King's Cup Race).

EDITORIAL COMMENT.



NEVER in the history of aviation has a flying exploit so stirred the public imagination as the crossing of the Atlantic by Capt. Charles Lindbergh. Probably the nearest approach to it we have had in this country was the return of Hawker and Mackenzie Grieve from their Transatlantic attempt in

1919, when, after having been missing for a week, news was at last received that they had been picked up and were safe. Even the successful flight across the Atlantic, from Newfoundland to Ireland, by Alcock and

Honouring Lindbergh

Brown, in the same year, hardly aroused such widespread interest and enthusiasm as that which found expression on Sunday last when, it is estimated, more than 100,000 people flocked to the Croydon aerodrome to see Lindbergh arrive from Brussels. That portions of the crowd broke through the flimsy barriers and swarmed on to the aerodrome is scarcely to be wondered at, nor should we blame too severely those who committed this breach of aviation etiquette. It is something to the good that the Londoner takes enough interest in flying to stream out to Croydon in his tens of thousands to see the hero of a famous flight. He cannot be expected, yet, to know that by getting on to the aerodrome he is not only endangering himself, but also the occupants of any aircraft that may be attempting to land there. As it was, we think it speaks well for a London crowd that Lindbergh's machine was not, by the irresistible crush, seriously damaged, and that the only repairs necessary before he was able to fly the "Spirit of St. Louis" to Gosport for dismantling preparatory to sending it back to America were a few patches of fabric here and there.

By his flight Lindbergh has done one very great thing, as far as Great Britain is concerned. He has helped—even if it should prove only for a short period—to make the British people "air-minded." For that we cannot thank him enough, and the award to Lindbergh by His Majesty of the Air Force Cross is a very fitting expression of an esteem and

admiration shared by the whole British commonwealth. May we, on behalf of all our readers, join in congratulating a very gallant gentleman, and thank him for what his magnificent performance has achieved for aviation.

Bournemouth Whitsun Meeting

Again a very handsome entries list promises good racing for the aviation meeting that is being held at the Ensbury Park racecourse at Bournemouth on Saturday next and on Whit Monday. Nearly 100 entries have been received by the Royal Aero Club, under whose organisation the meeting is being run. That is not, of course, to say that 100 different machines will take part in the racing, since a great number of machines are entered for several events. Nevertheless, even allowing for this fact, the number of entries is very gratifying, and it is to be hoped that the attendance on the two days will be such as to encourage future meetings to be held, not necessarily at Bournemouth, but elsewhere in the country.

Concerning the various events there is little to be said. Generally speaking, they are a repetition of the events of the Bournemouth Easter meeting. After that meeting we pointed out that racing, unrelieved by any other form of flying, is apt to become a little monotonous, and it does not appear that anything has been done to remedy this shortcoming at the Whitsun meeting. We cannot help thinking this is a mistake, and if, as an afterthought, the organisers are able to sandwich in between races a few events of a different character, aerobatics, "crazy-flying," balloon-" strafing," etc., we feel sure the spectators will welcome such diversion.

The New Handicap Formula

Elsewhere in this issue of FLIGHT we publish the new formula which is to be used for handicapping machines taking part in the race for the King's Cup, to be held at Bournemouth on July 30. The formula was given briefly in the AIRCRAFT ENGINEER last week, but in the present issue it is supplemented by the curve used for determining the value of the coefficient K in the formula for machines fitted with air-cooled engines. Examples are given of machines of various power-span ratios, and it is shown that the effect of the formula is to credit high-power fast machines with air-cooled engines with considerably smaller speed than corresponding machines with water-cooled engines. In view of the greater head resistance of air-cooled engines this is fair enough, although at the moment it is rather uncertain whether the allowance made does not err in under-estimating somewhat the speeds of fast machines with air-cooled engines.

As regards the formula in general, from a few examples which we have worked out, it would appear that the general tendency is to under-estimate the speeds all around. Whether this is really so or not is difficult to decide beforehand. Any amount of "cleaning up" will be permitted, and is not taken into account in estimating the speed for handicap purposes. Consequently, one may expect that all competitors will do their utmost to save head resistance by "fairing" everything as far as possible. What will also have a considerable effect is the speed at which it is safe to run the various types of engines. No stipulation is made that engines must be run at the

"maximum permissible" speeds of the type tests, and if one engine has got its type tests at speeds well within its capacity, it will obviously be better off than another engine, the "maximum permissible revolutions" of which in the type tests were very close to the maximum of what the engine will stand.

The Ryan monoplane used by Lindbergh in his transatlantic flight is a typical example of good streamlining, and consequently we have thought that it might be of interest to examine how "The Spirit of St. Louis" would fare in the King's Cup race. (Not, of course, that it is likely to take part!) The maximum power of the Wright engine is stated to be 223 h.p., and the wing span is 46 ft. Thus the P/S^2 ratio is 0.105, and from the curve on p. 353, the value of K corresponding to this is 11.71, which gives a speed, under the new formula, of only 107 m.p.h. We are credibly informed that the top speed of the Ryan monoplane is 124 m.p.h., so that it would appear that either the new formula can come very badly "unstuck," or the Ryan is an exceptionally efficient machine, or finally, that the Wright "Whirlwind" engine develops considerably more than 223 h.p. at "maximum permissible revolutions."

Another machine to which reference is made in this week's issue is the Gloster "Gamecock II," with Gnome-Rhone "Jupiter" engine. Under the new handicap formula, this machine, at maximum revolutions of 1,800 r.p.m. and a power of 454 h.p., would be credited with a speed of 154 m.p.h. The actual speed claimed by the makers is 150 m.p.h., with the assurance that with better tuning up, a somewhat greater speed can certainly be attained. Thus in this case the formula appears to give about as great an accuracy as could be expected from a simple formula that has to cover a variety of types. Incidentally, the speed of 150 m.p.h. would correspond, in the handicap formula, to a maximum power for the "Jupiter" engine of 420 h.p. when the handicap speed would be just about 150 m.p.h.

A Splendid Innovation

The offer by the Under-Secretary of State for Air, Sir Philip Sassoon, of a Cup for competition between single-seater fighter squadrons is an innovation which must be received with satisfaction. The fighter squadrons always hold a warm place in the affections of all who take an interest in the Royal Air Force, and competition between the various fighter squadrons cannot but have a beneficial effect on the esprit de corps of the squadrons. The competition for the Sassoon cup has been going on for some time now, the individual squadrons holding eliminating trials to determine who should represent the squadron in the final race. The fastest machine of each squadron was thus chosen for the final, held at Northolt last week, in which nine machines took part. Different types of single-seater fighters being represented, the final race was a handicap one, and that the handicapping was good will be realised when it is pointed out that the finish was a very close one, the race being won by F/O Montgomery, of No. 32 Fighter Squadron, Kenley, on a Gloster "Gamecock I," with Bristol "Jupiter" engine. Second and third places were also secured by two "Gamecocks," so that the Gloster Company can be said to have done well in the Sir Philip Sassoon race. It is of interest to know that the speed of the winner was 156 m.p.h.



HERO WORSHIP : Some of the 100,000 or more visitors to Croydon last Sunday who gave Lindbergh such a wonderful reception. Below is a general view of the main enclosure, and above it (left) is a portion of the crowd seen from the front. On the right the "unloosed" crowd is seen making for "The Spirit of St. Louis"—the wings of which are just visible above their heads.

["FLIGHT" Photographs]

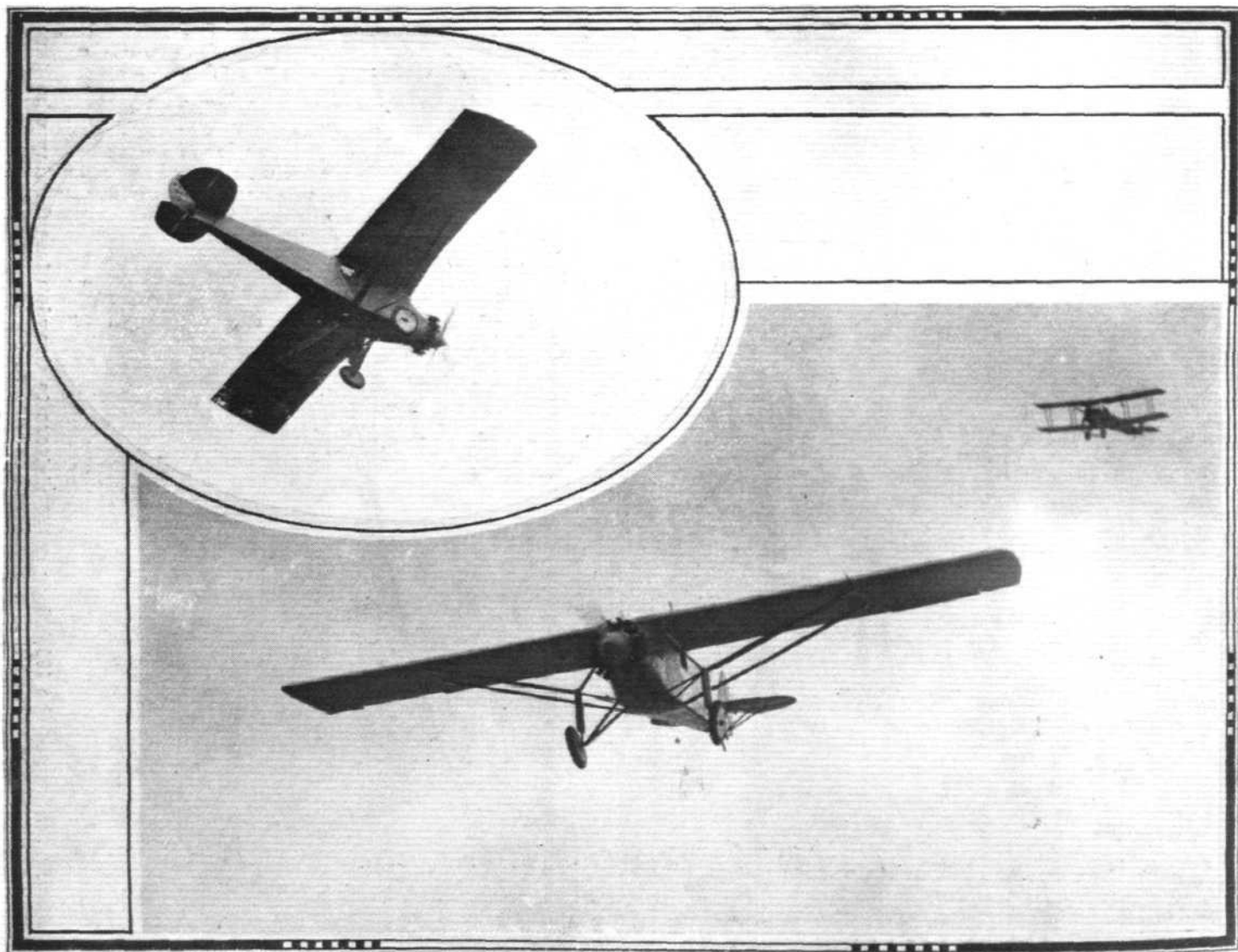
London's Welcome to Lindbergh

"THIS is worse than I had at Le Bourget." So said Captain Charles Lindbergh—the hero of the Non-stop New York-Paris flight—when called upon to make a speech after his arrival at Croydon on Sunday; and certainly the scenes that took place on the aerodrome that afternoon have never been equalled in this country—and probably not in any other country either. That disaster did not accompany the splendid welcome accorded him was really remarkable, for at the last minute the crowd—over 100,000 strong—took matters into its own hands and swept everything before it, fences, police (there were only a mere handful anyway), reception committee, and all the carefully pre-arranged plans. As a result, Lindbergh had the greatest difficulty in landing and only did so

by most skilful piloting and judgment—while his aerial escort had to remain up aloft, or go elsewhere.

It would hardly be correct to say that the crowd got out of control, for as a matter of fact it controlled itself remarkably well—there were only some half-dozen casualties—and gave an excellent example of that extraordinary collective coolness that is characteristic of British crowds. It may be of interest to add here that in spite of the fact that from the moment "The Spirit of St. Louis" landed it was for a considerable period "under compression" (Lindbergh, we presume, being more or less in a state of "tension") only slight damage was done to the fabric of the tail plane!

However, let us tell the story from the start. At an early



"THE SPIRIT OF ST. LOUIS" SHOWS ITSELF: Before attempting to land on the few feet of Croydon Aerodrome available, Lindbergh made several circuits, and this was about as much of him that the majority of the people saw! These two views give a good idea of the general lines of the Ryan monoplane (220 h.p. Wright "Whirlwind") that has made history.

hour on Sunday large numbers of people arrived at the aerodrome so as to be in good time to greet Capt. Lindbergh, who was due to arrive from Brussels between 5 and 6 p.m. Many came by motor car, but trains, trams and buses from all points leading to or near Croydon were packed throughout the afternoon, while bicycles and pedestrians largely contributed to the steady influx. Several aircraft also arrived at intervals from various places, N. H. Jones creating quite a stir when his A.N.E.C.11 monoplane suddenly appeared out of the haze—for everyone was looking out for a monoplane! Among those to arrive by air we noticed Sir John Rhodes ("Moth" 'NM), and Capt. de Havilland ("Moth" 'QH).

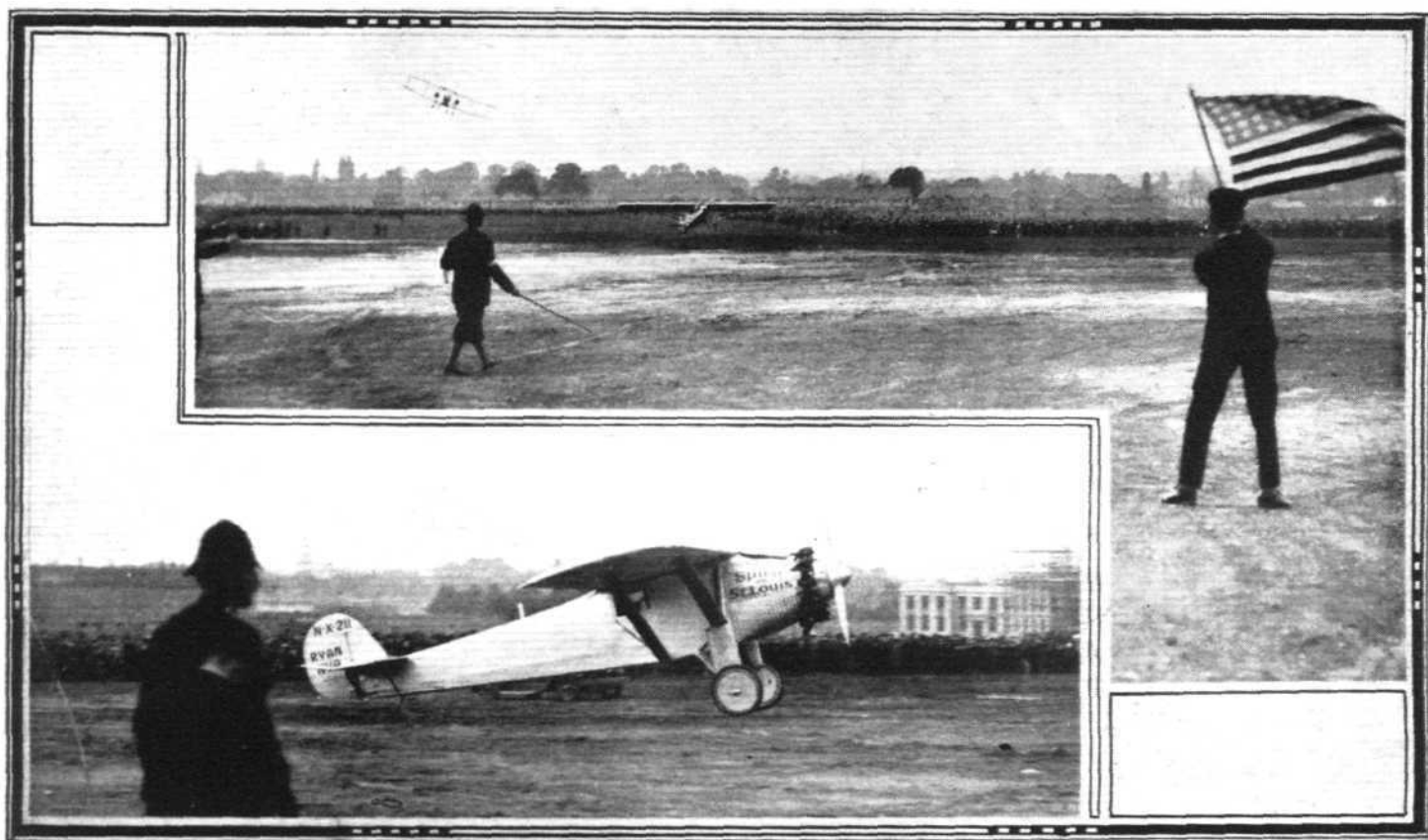
By 4 p.m. the enclosures were thoroughly packed with people and cars, while the Purley Way on the far side of the aerodrome, in adjacent fields, and on every roof or tower, masses of spectators could be seen. In addition to this, a crowd several thousand strong broke a way into the aerodrome from Stafford Road, close by the A.D.C. Aircraft buildings; motor cars and what few police that could be spared, were at once rushed to meet them and line them up out of the way of machines taking off and landing. This unexpected incident caused the officials some anxiety, for it was obvious to many

the "Press." After the official welcome, Lindbergh was then to have been "presented" to the spectators in the enclosures, by aid of the aforementioned Franklin car. Well! "Mice and Men will happen in the Best—" or words to that effect. However.

Meanwhile, our hero was making a remarkable journey from Brussels, where he departed at 3.30 p.m., accompanied by a D.H.50 piloted by Capt. R. H. McIntosh, who wirelessly their progress and route to Imperial Airways throughout the trip. Soon after leaving Brussels Lindbergh unexpectedly made for Roulers fair, over which he swooped low down, then when the coast was reached he played all sorts of antics, flying within a few feet of the sea and zooming over the ships passed en route across the Channel.

Instead of passing over Folkestone as originally planned, Lindbergh made for the Thames estuary, the D.H.50 still in attendance, and flew up the Thames to London. London thus had the unexpected pleasure of seeing "The Spirit of St. Louis," now joined by the aerial escort, flying comparatively low over their heads.

It was shortly before 6 o'clock that a bunch of aircraft hove into sight to the east of Croydon aerodrome, and instantly



["FLIGHT" Photographs]

LINDBERGH LANDS : Two views of "The Spirit of St. Louis" alighting in the narrow path left for it by the crowd, which can be seen, in the top picture, surging forward.

that there was going to be trouble—as trouble there was—from this section of the crowd.

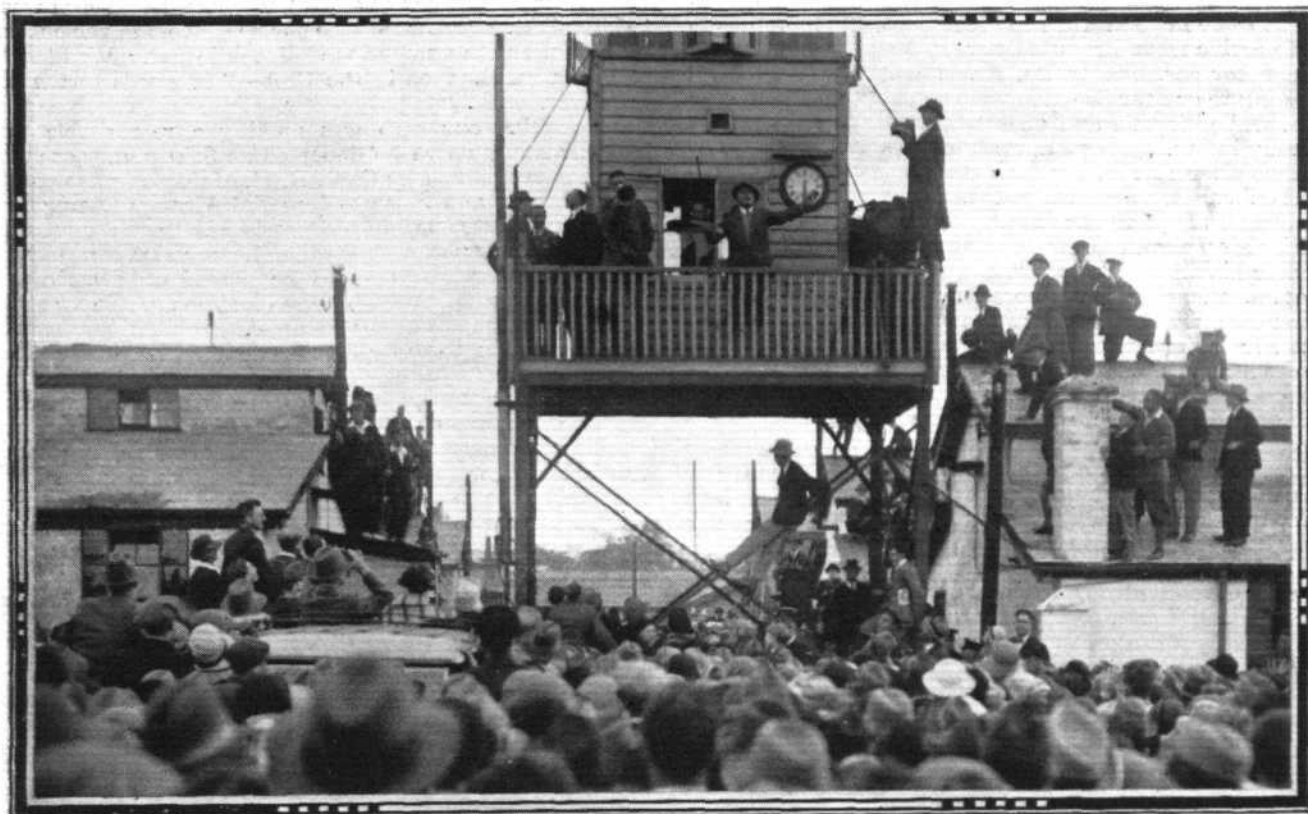
While we were waiting, and news had arrived that Lindbergh was on his way, three of the Imperial Airways Handley Page air liners took off for the purpose of meeting him and escorting him into Croydon. They were joined by sundry other machines, while throughout the afternoon the Surrey Flying Services' Avros were very busy taking up joy-riders. Incidentally, one of the Avros made a forced landing just outside the aerodrome—in full view of the spectators—with more or less minor injuries to machine and two of its four passengers.

As the time for Lindbergh's arrival approached, Commander Perrin, assisted by a megaphone and a Franklin air-cooled car, outlined to all and sundry the very excellent plans that had been arranged for the official welcome, and asked the visitors to assist in carrying them out. It was arranged that Lindbergh, on arriving over the aerodrome, would land alongside the main enclosure and come to rest near the Stars and Stripes banner opposite, where the reception committee, including Sir Samuel Hoare, Mr. Houghton (the American Ambassador), Lord Thomson, and many other prominent personalities were assembled, together with

there was a hum of excitement all round. As they drew nearer it was possible to sort them out—there were three big Handley Page air liners and three smaller buses, and in the centre, the distinctive form of the silver monoplane; several other machines that had been hovering near by now joined the group, and all came in low over the aerodrome, the immense roar of cheering completely drowning the noise of their engines.

Then the trouble commenced. The previously mentioned crowd, in the north-east corner of the 'drome, with one accord commenced to advance forward—for all the world like treacle upset upon a tablecloth. In vain did a few cars endeavour to keep them back—but on they swept, right over the spot where Lindbergh was to land. The small crowd outside the main enclosure gave little trouble, and those behind kept calm, although the flimsy barriers swayed with their pressure.

Lindbergh circled and zoomed over the 'drome and apparently took in the situation, for he waited his chance until a narrow path was with great difficulty, cleared for him. Then, with a splendid side-slip approach he came down, flattened out and touched the ground at 6 p.m., some distance from the



[“ FLIGHT ” Photograph]

“ THIS IS WORSE THAN I HAD AT LE BOURGET ” : Comdr. Perrin is not conducting the community singing, but calling order for Lindbergh, who is seen making the above “ speech ” through the megaphone. The “ platform ” is the wireless control tower on the Croydon Aerodrome.

“ reception mark.” At this moment, however, the palings at the western side of the enclosure gave way, and a swarm of people rushed out on the ‘drome in front of the still moving machine. It looked as if disaster was certain, but Lindbergh saw it all in a flash, and opened out his engine, zooming up aloft once more over their heads.

Again an effort was made to clear a space, swarms, it seemed, of machines swirling frantically aloft and trying to get down

the meanwhile. At last a small narrow space was cleared, and Lindbergh made a second attempt, with a similar side-slip descent, and skilfully brought his machine down between the sea of faces.

As his machine ran along the ground the crowd on the aerodrome made a rush after him, followed by the crowd in the enclosures, now released by the collapsed barriers. The police also ran. The official reception committee, and the Star



[“ FLIGHT ” Photograph]

LONDON'S WELCOME TO LINDBERGH : Some of the reception party who were to have given the airman an official welcome as soon as he had landed. In the group will be seen, from right to left, Lord Thomson, Mr. Houghton (American Ambassador), Col. the Master of Sempill, Col. Joyce (U.S. Air Attaché), Comdr. Perrin, Sir Samuel Hoare, and Mr. F. G. L. Bertram.



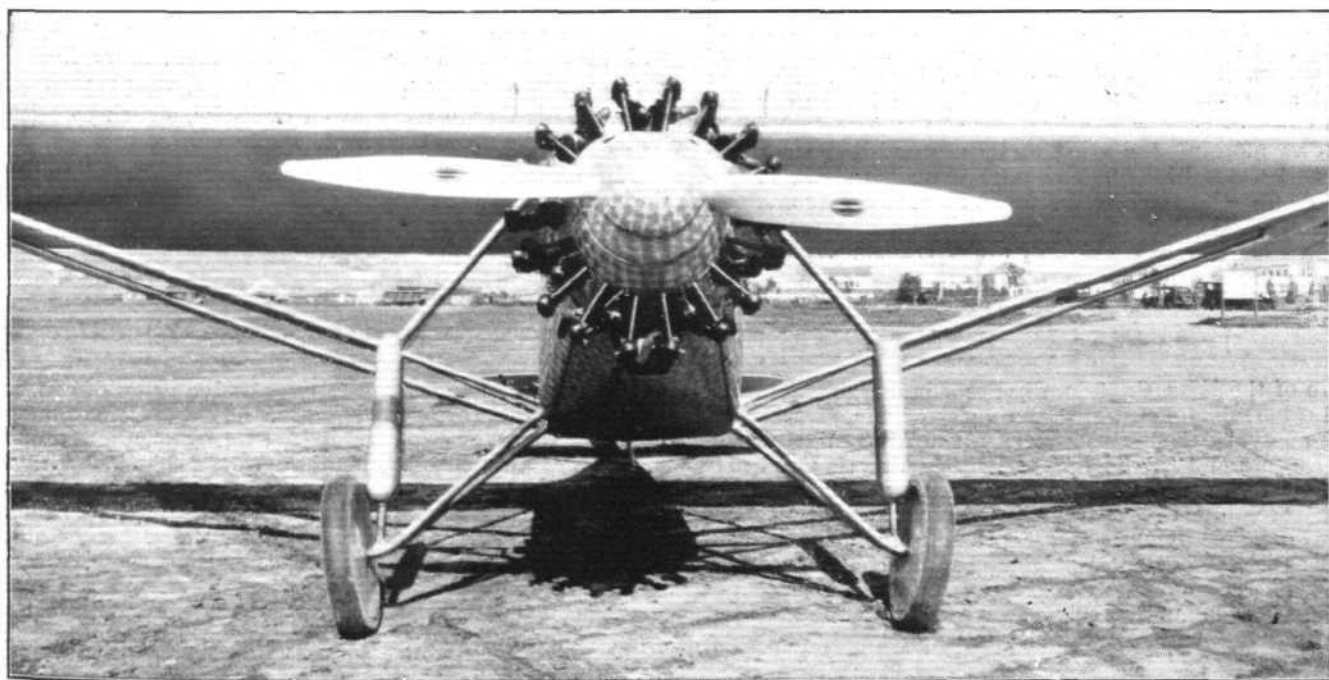
"THE SPIRIT OF ST. LOUIS" : View from the air of Capt. Lindbergh's transatlantic machine during a test flight. The machine was designed by Mr. Donald A. Hall, chief engineer and designer of Ryan Airlines of San Diego, California.

Spangled Banner, disappeared from view, as did the greater portion of Croydon aerodrome.

From our view point, looking over the sea of heads, all we could see were the wings of the Ryan monoplane, and moving slowly towards it bunches of human torsos; below the latter, we understand, were motor-cars. The object of this remarkable demonstration, remembering Le Bourget, wisely remained in comparative safety within his "box," smiling nervously at the frantic efforts of those without to shake hands with him through the windows! It was some time before a party of officials, police, etc., were able to get up to the machine and clear a space round it, so as to enable Lindbergh to get out. Then, saying, "Please lookout for my machine," he got into a car, the crowd still laughing, pushing and cheering. But it was one thing to

get into the car, and quite another to drive away! It made but little progress, and it was only by a ruse that it was able at last to reach the aerodrome offices. The crowd were told that there was an injured woman in the car, and to make a path for them to pass. This at once they did—another example of the sportsmanship of a British crowd—and the car, with a few people still hanging on, made fairly rapid progress to the control tower, where the scattered reception committee had collected itself.

Here Lindbergh was hurriedly squeezed into the Traffic Officers' room, and the door was securely bolted. It soon got around that the airman was within, and still more crowds surged up, calling for Lindbergh, and cheering wildly, but with perfect good humour. For a long time the crowd called "We want Lindbergh"—or "Linderberg," as many had it,



THE "WRIGHT SPIRIT" : View of the business end of the Ryan monoplane "Spirit of St. Louis," on which Capt. Lindbergh flew from New York to Paris. Note the neat cowling around the Wright "Whirlwind" engine, the spinner over the boss of the Duralumin propeller, and particularly the unusual undercarriage arrangement.

and shouted for him to climb up on the control tower. And it was a hearty roar of delight that went up when at last he was seen climbing briskly up the ladder to the first platform. As he stood there, his flushed face looking pale, or his pale face looking flushed—we forget which, and the various Press reports are so uncertain on this point!—and smiling all over, the crowd cheered and cheered again, calling "Speech."

Then he was handed a megaphone and Commander Perrin having called for order, he made the following speech to the crowd:—"I just want to say that this is worse than I had at Le Bourget. . . . What could I say better?" At this the crowd cheered again, and sang, "For he's a Jolly Good Fellow," but nobody seemed inclined to depart, and the boyish looking figure in flying kit stood looking proudly on, all smiles.

Eventually Commander Perrin appealed to the crowd—"Now you have seen Capt. Lindbergh," he said, "we shall be glad if you will all go home, because we want to get him out, and we can't do that while you remain here." But still the crowd cheered and hung on, while Commander Perrin cried, "Be Sportsmen, this poor fellow wants to have some tea! Haven't you got any homes?" The only reply was the "Frothblowers' Anthem."

Then Lindbergh himself took a hand. He told them that the American Ambassador wanted him to ask them to make way for his car. The crowd cheered, and made way for the car, which came "alongside" with the help of the police. Lindbergh then proceeded to climb down from the tower, but at a sudden rush on the part of the crowd he hesitated half-way down, and smilingly said: "Say, I'm not coming down just yet awhile!" Several such attempts were made before a way was at last cleared and he was bundled into the car—in which Sir Samuel Hoare, Lady Maud Hoare and the American Ambassador were already seated—and, little by little and bit by bit, was driven out of the aerodrome to the Embassy.

In the meanwhile "The Spirit of St. Louis" had been wheeled to a safe place in one of the new hangars on the far side of the aerodrome. For hours after Lindbergh had departed large crowds hung about—some having more joy flips—while the rest launched forth on a long, slow, tedious attempt to get home. All the roads for miles round were blocked with traffic for hours, while public service vehicles and trains were hard at work conveying masses of people to various points until quite late in the evening.

At Brussels.—After a round of entertainments at Paris, Capt. Lindbergh left Le Bourget for Brussels on Saturday, escorted by some half-a-dozen French machines. Before leaving Paris he made a wide circle over the city and dropped a message at the Place de la Concorde, thanking the people of Paris for their kindness to him. He arrived in Brussels at 3 p.m., escorted into the aerodrome by a Belgian air squadron, and was received by M. Jasper, Prime Minister, and General Tilkens. Large crowds gathered on the aerodrome to greet him, and a strong force of military, with fixed bayonets, were in attendance to maintain order.

Later in the afternoon Capt. Lindbergh was received by the King and Queen of the Belgians, and was decorated by the King with the Cross of the Order of Leopold. He then attended a reception at the Aero Club, and in the evening was the guest of honour at a banquet at the American Club. On Sunday morning the King and Queen visited the aerodrome, and Capt. Lindbergh showed them his Ryan monoplane. At noon he was received by M. Max, the Burgomaster, and then lunched privately at the American Embassy.

While on his way to London in the afternoon, Capt. Lind-

bergh dropped flowers from his machine as he flew over the Waereghem Cemetery, where there are the graves of American soldiers.

In London.—Since his arrival in London, Capt. Lindbergh has been spending a very busy time. On Monday morning he paid an early visit to Croydon to inspect his machine, and later was the guest of honour at a private luncheon given at the Embassy by the American Ambassador.

At a dinner in the evening given by the Association of American Correspondents, a special course was provided for Capt. Lindbergh, consisting of five sandwiches and a half-gallon jar filled with water!

Tuesday's programme was as follows: In the early hours of the morning he went to Croydon and, escorted by two Service machines, flew "The Spirit of St. Louis" to Gosport where it is to be dismantled for shipment to America. He then piloted one of the Service machines, a Hawker "Woodcock" (Bristol "Jupiter") back to Croydon, rushed back to the Embassy to change prior to going to No. 10, Downing Street, where he was received by Mr. Baldwin.

After this he went to Buckingham Palace and was presented to the King and Queen. His Majesty asked many questions about the great flight, and then bestowed upon Lindbergh the Air Force Cross. As the airman was leaving the Palace, little Princess Elizabeth waved her hand to him, whereupon Lindbergh went up, shook hands and patted her cheek! He then drove to York House where he was received by the Prince of Wales. Of course, during these dashes from place to place, he had to dodge large crowds waiting to catch a glimpse of him.

Then came the Air Council Luncheon at Claridge's, at which Sir Samuel Hoare presided, and many representatives of the Air Council, Air Ministry, etc., were present. After this luncheon Lindbergh proceeded to the House of Commons, as guest of Lord and Lady Astor, where he was received by the Speaker. He spent a short time listening to a debate and then had tea on the Terrace, after which he paid a short visit to the House of Lords. In the evening he attended the banquet given in his honour by the Royal Aero Club, Royal Aeronautical Society, the Air League, and the S.B.A.C., a report of which follows these notes.

Following the banquet Lindbergh continued his "endurance" record and proceeded to the May Fair Hotel, where the Anglo-Swedish Society were holding a dinner. On the next lap he went to the Derby Ball at the Royal Albert Hall, in company with Lord Lonsdale. Here he met with a rousing reception, and after saying a few words he was, at the request of Lord Lonsdale, allowed to mingle with the dancers more or less unmolested. At 4 a.m. he went—to bed.

Capt. Lindbergh's last "big noise" in this country included a visit to the Derby on Wednesday, followed by a banquet given by the American Society in London, the American Chamber of Commerce, and the American Club. Today (Thursday) he is scheduled to fly from Croydon to Paris, piloting a Service machine loaned for the occasion. He will stay in Paris until Saturday, when he will fly to Cherbourg, where he will embark on the U.S. destroyer *Breck*, which will take him home to New York—then, more fireworks!

Items.—The Spanish Government has decided to confer on Capt. Lindbergh the Plus Ultra Medal, struck to celebrate Comandante Franco's flight to Buenos Aires.

The Linen Merchants' Association at Belfast have asked Capt. Lindbergh to accept the gift of some Irish linen handkerchiefs, for his own use, and table linen for his mother.

BRITISH AVIATION HONOURS LINDBERGH

THE hero of the hour, Captain Charles Lindbergh, Air Force Cross, Legion of Honour, was the guest of the Royal Aero Club, the Royal Aeronautical Society, the Air League of the British Empire and the Society of British Aircraft Constructors, at the Savoy Hotel on Tuesday last. It was a most brilliant assembly that gathered to give an enthusiastic welcome to the young hero, and it seemed to include everyone in the English aeronautical world. In the chair was Lord Thomson, Chairman of the Royal Aero Club. In his opening speech he said that unlike Byron, who woke up one morning to find himself famous, Captain Lindbergh kept awake for 61 hours to make himself famous. What appealed to him so much in this wonderful exploit was the human touch, and the personality of Captain Lindbergh. He was a man in

every sense of the word, only twenty-five years of age, and a modest young man—which, after all, was something of a miracle. He had been exposed to the blast of adulation, praise, and publicity to such an extent that had hardly been equalled in this country or elsewhere, and it had come upon him suddenly. But he would say that if they could get inside the mind of Captain Lindbergh there they would find a man who, apart from all personal considerations, was devoting his life to aviation, in the progress and advancement of which he was more deeply interested than in any other thing in the world. In honouring him they did themselves great honour.

Sir Philip Sassoon said that the Paris-New York flight was a notable triumph for American aviation, which nobody

grudged. Indeed, one could not grudge it when the man who had performed it had displayed in his success so much modesty and so much consideration for others, and had paid a human tribute to the gallant Frenchmen who failed where he succeeded. The flight was more than a triumph for an American airman and American engine, it was also a triumph for world-wide civil aviation.

Marshal of the R.A.F., Sir Hugh Trenchard, said that the R.A.F. had been tremendously interested in the great flight. They knew what it meant to him. The determination, endurance and true air instinct had commanded their admiration. A pilot had said to him, speaking of Captain Lindbergh, that he stood in the front rank of born airmen. They of the Royal Air Force took off their hats to Captain Lindbergh.

Capt. Charles Lindbergh then rose amid applause. He has his country's accent but without those American colloquialisms which we always assume is part of the American language. He is entirely unaffected, and, indeed, lacks self-consciousness to an extraordinary degree. He said that he would make no attempt to thank them for his reception—it would be impossible to do so. He had learned much about his flight and himself from the papers, and he noticed in particular the interest in the navigation. Three and a half months ago a group of business men of St. Louis, who were interested in the promotion of aviation, decided to construct an aeroplane for a flight between New York and Paris non-stop. It was built in about two months and tested. They had decided to have a single-engine ship because of its greater cruising range: it could carry 300 miles more gasoline. The fact that he safely reached the coast of Europe was not due in any way to what might be called luck in navigation. If the winds had drifted him 300 miles off his course he would still have had enough gasoline to reach Paris. Had he been driven as far north as the northern coast of Scandinavia or as far south as the northern coast of Spain, though it would not have been possible to reach Le Bourget, there would have been no danger either to himself or to the aeroplane. These were the principles upon which he based his navigation without carrying an observer. The weather conditions on his flight were not altogether as predicted. He had expected a clear area over the Atlantic. He left in a haze and up to Newfoundland the conditions were better than predicted, but then he went through cloud bursts for ten minutes at a time, and also rain. North of Nova Scotia the water was mostly covered with ice, but on the whole the conditions were better. One hundred miles out from St. John's he ran into haze, and he climbed to 8,000 ft. to get above a storm area, but the planes were covered with sleet and he had to turn back. For the first two hours of the night there was no moon and the sky was hazy, and there were no stars. He could not see beyond the windows of his cabin. When he was hundreds of miles off Ireland the fog cleared. He only saw the lights of one boat through the fog after leaving Newfoundland, and he saw no shipping during the day until he was 75 to 100 miles off Ireland, when he sighted several fishing boats. From then he experienced conditions which he could describe by saying that the clouds appeared like a mirage. He would see a shore line or island ahead but no buildings, and he was certain it was land several times, but when he reached the area he found only clouds of varying colours, black, purple and white. It was clear weather and very easy flying after the crossing and on the final stages of his flight to Paris. In conclusion, Capt. Lindbergh said that questions had cropped up from time to time about secrecy. He said they had no secret to hide as far as his flight was concerned. Everything about it was open to every country and if there was anything concerning the

flight or the 'plane which he could explain he would be very pleased to do so.

Lord Thomson rose again and said that it was his pleasant task to present to Captain Lindbergh a gold cup, which was the gift of the directors of *The Daily Mail*. Before doing so, he would remind them of certain facts in regard to the development of aircraft. He would go back to 19 years ago. When the late Lord Northcliffe returned from France, having seen the performance of Wilbur Wright in 1908, he was convinced, as far as the mechanical side of aviation was concerned, that it had a great future, and with characteristic energy and vision, Lord Northcliffe decided to do all that in him lay to encourage British aviation. At that time there were many doubters. For every one to-day there were a hundred then. "Neons" were thick upon the ground. First a £1,000 was offered for the first Channel flight, a feat which many people regarded as ridiculous, but Blériot proved them wrong. In the end, the *Daily Mail* gave £50,000 in prizes, and had consistently acted up to its old course of action. It gave to the man who had confuted the pessimists and made the critics look so foolish a gold cup to commemorate his triumph. He hoped the hero of the hour would take the cup away just as a sign of the esteem in which a great London newspaper holds him. Lord Thomson then presented the gold cup to Captain Lindbergh. In reply, Captain Lindbergh said that he found himself unable to discover words to express his appreciation of that and all the honours that he had received since he came to London. When the toast for Captain Lindbergh was given, prolonged cheers were raised, and everyone sang "For he's a jolly good fellow," followed by further cheers for his mother.

The Swedish Minister for London, Baron Palmstierna, in a humorous opening to his speech, said that he approached his friend the American Ambassador and asked him to whom Captain Lindbergh belonged. America had former claims on him, but by law of nature he was more of a Swede. The Swedes joined in the congratulations to him. He felt proud of him, not only for his pluck and skill, but for the simplicity of his nature and the manner in which he had received his reception. He set an example which warmed their hearts and endeared him to them. The Swedes wished him to go to Sweden. He would get there a reception which would bear witness that the people of Sweden regarded him as another bond strengthening the friendship between the Swedish and English-speaking world.

Amongst those present were:—

Capt. H. E. P. D. Acland; Mr. C. V. Allen; Maj. R. Harrison Archbald; Prof. L. Bairstow; Messrs. O. H. Baldwin (Vice-President, American Club); A. J. A. Wallace Barr; F. G. L. Bertram; Comdr. J. Bird; Mr. Robert Blackburn; Air Vice-Marshal Sir W. S. Branker, K.C.B.; Mr. Griffith Brewer; Lieut.-Col. W. A. Bristow; Capt. H. S. Broad; Sir A. W. Brown; Mr. A. E. L. Chorlton; Sir Alan J. Cobham; Lieut.-Col. M. O. Darby; Maj. G. Dennison; Lieut.-Col. J. D. Dunville, C.B.E.; Messrs. C. R. Fahey; A. H. R. Fedden; Capt. T. A. Gladstone; Gen. P. C. R. Groves; Gen. A. Guidoni; Sqdn.-Ldr. R. A. de H. Haig; Maj. F. B. Halford; Maj. Harmon; Capt. G. de Havilland; Maj. H. Hemming; Air Vice-Marshal Sir John Higgins; Wing-Comdr. T. O'B. Hubbard; Sir Samuel Instone; Mr. L. Leroy Irvin; Lieut.-Col. K. A. Joyce; Admiral Mark Kerr; Comdr. Kirkpatrick; Capt. A. G. Lamplugh; Mr. W. Lappin; Col. F. Lindsay Lloyd, C.M.G., C.B.E.; Air Commodore A. M. Longmore; Mr. John Lord; Lieut.-Col. Robert Lorraine; H.S.H. Princess Ludwig Lowenstein-Wertheim; Lieut.-Col. Sir F. K. McClean, A.F.C.; Maj. R. H. Mayo; Lieut.-Col. J. T. C. Moore-Brabazon, M.C., M.P.; Mr. F. Handley Page; Baron E. K. Palmstierna (Swedish Minister); Messrs. George Parnall; R. J. Parrott; H. E. Perrin; H. J. Preston; Lieut.-Col. C. E. C. Rabaghati; Mr. F. P. Raynham; Dr. E. D. Whitehead Reid; Mr. A. V. Roe; Sir Philip Sassoon, Bart., G.B.E.; Air Vice-Marshal F. R. Scarlett; Col. the Master of Sempill; Messrs. H. O. Short; F. Sigrist; T. O. M. Sopwith, C.B.E.; Capt. T. N. Stack; Rear-Admiral Murray F. Sueter; Sir George Sutton, Bart.; Mr. G. Holt Thomas; Brig.-Gen. the Lord Thomson, P.C., C.B.E., D.S.O.; Marshal of the Royal Air Force Sir H. M. Trenchard, Bart.; Messrs. H. T. Vane, C.B.E.; M. H. Volk; Sir Charles C. Wakefield, Bart.; Mr. Howard T. Wright.

AIR DISARMAMENT

ON May 23 a conference on the limitation and reduction of armaments, organised by the League of Nations Union, was opened at the London School of Economics, Aldwych. Maj. J. W. Hills, M.P., presided, and was supported by Lord Cecil of Chelwood, Lord Parmoor, Lord Thomson, Sir Samuel Hoare, Maj.-Gen. Sir F. Sykes and M. Louis de Brouckère.

Sir Samuel Hoare (Secretary of State for Air) speaking on the question of the air arm, said that the Government realised the great danger of competition in air armaments, which almost day by day became more formidable as instruments of destruction. He pointed out, however, that it was well to realise the peculiar position Great Britain found herself from the point of view of air defence.

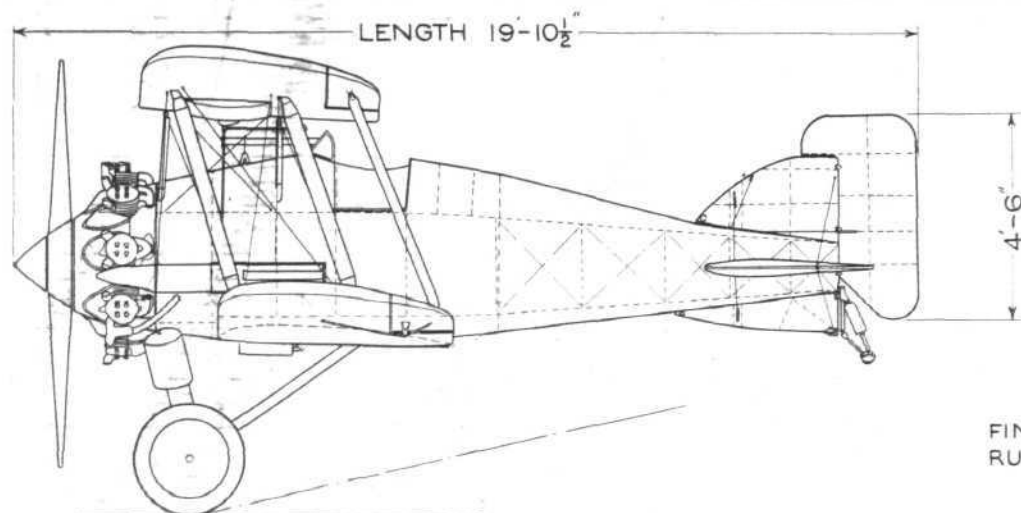
Compared with all the great countries in Europe, Great Britain was the most vulnerable of any to air attack, and it was the recognition of this fact which made the Government in 1922 embark on a policy of strengthening their air defence,

a policy in which each of the succeeding governments had taken a share. That policy was today about half completed, but even so, if they compared the strength of the greatest air force within striking distance of this country, we were still only in the proportion of one to two.

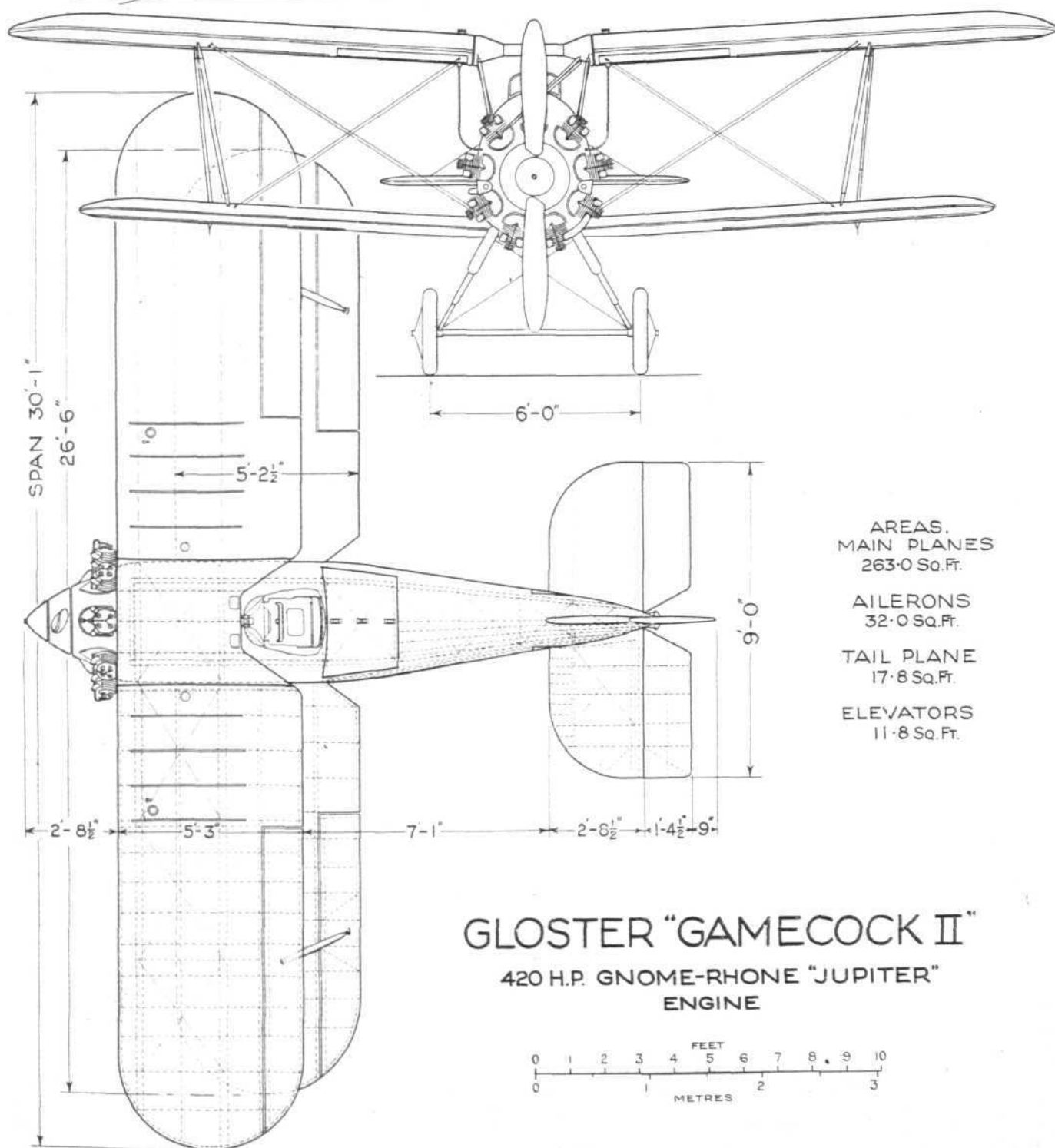
No Government, said Sir Samuel, could allow that state of affairs to continue, or could agree to a *status quo* of that kind being the basis of any international agreement. If, however, the striking force of the nearest Great Power, within reach could be reduced, for example, to 300 first-line machines, there would then be no need for any further extension on our part. In fact, if this striking force could be reduced to a still lower figure, then there would be justification for our reducing the small force which we possessed at the present moment. We might, Sir Samuel added, as a step restrict what had been called the Metropolitan Air Forces, which were within easy distance of large centres of population.



AT THE SIGN OF THE SWASTIKA : Three views of a Gloster "Gamecock II" with Gnome-Rhone "Jupiter" engine recently acquired by the Finnish Air Force. (See also pages 351-352.)



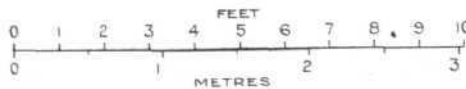
AREAS.
 FINS.....5.5 Sq.Ft.
 RUDDER.....7.0 Sq.Ft.



AREAS.
 MAIN PLANES
 263.0 Sq.Ft.
 AILERONS
 32.0 Sq.Ft.
 TAIL PLANE
 17.8 Sq.Ft.
 ELEVATORS
 11.8 Sq.Ft.

GLOSTER "GAMECOCK II"

420 H.P. Gnome-Rhone "JUPITER"
ENGINE



A GLOSTER "GAMECOCK II" FOR FINLAND: General arrangement drawings, to Scale. (See also pages 350-352.)

GLOSTER "GAMECOCKS" FOR FINLAND

"THE LAND OF A THOUSAND LAKES," or "Suomi" to give Finland its native name, has comparatively recently commenced seriously to interest itself in the establishment of an Air Force. Once it did decide upon the formation of such a force, however, there were no half-measures about it. It was laid down as a governing principle that in as far as finances would permit, the best obtainable flying material was to be obtained. Finland scores over most other countries, from an air force point of view, in having at the head of its air force men who are all comparatively young, men who are not, therefore, hidebound by ancient traditions in other services, and best of all, men who are practical flying people and who thus know what to aim at, what is good, and, last but not least, what is practical instead of what is mainly of theoretical value. Knowing a little of the history of the Finnish Air Force, one is not surprised to learn that an order has recently been placed by Finland for a batch of Gloster "Gamecock II" single-seater fighters, and thus very shortly the Finnish Air Force, or rather a part of it, will be mounted on really up-to-date machines worthy of the splendid personnel of which the force is composed.

Before commencing a description of the "Gamecock II," it may be as well to point out that in the general design of this machine one may trace quite easily an ancestry dating back through the Gloster "Grebe," and the Nieuport "Night-hawk" to the S.E.5A, with the design of which latter Mr. H. P. Folland, now Chief Engineer and Designer of the Gloster company, was concerned at the Royal Aircraft Factory (as it then was) of Farnborough. Thus Mr. Folland has had very lengthy experience of designing single-seater fighters, first at Farnborough, then with the British Nieuport Company, and during the last six or seven years with the Gloster Aircraft Company. During that period Mr. Folland has designed, and the Gloster Company produced machines of various other types, it is true, but in the main one may say that the firm has specialised in single-seater fighters or in closely related types such as racing land and seaplanes. The "Gamecock II" therefore represents the accumulated experience of Mr. Folland, his chief assistant, Mr. Preston, and the rest of the technical staff of the Gloster company, and that the Finnish Air Force is not acquiring an experiment but a well-trying type will be realised when we point out that the "Gamecock I" has been in use in the British Royal Air Force for a long time, while the "Gamecock II" as delivered to the R.A.F. is still on the "secret list." In this connection it should be pointed out that the R.A.F. "Gamecock II" differs from the type delivered to Finland mainly in that it is fitted with a British Bristol "Jupiter" Mark VI, while the Finnish machines are equipped with the Gnome-Rhone "Jupiter," which is less powerful, and thus may be expected to give a rather lower performance. Also, the Finnish machines have painted on their sides the Swastika in place of the circles of the British "Gamecocks," but it is not thought that this greatly affects the performance! The machine was demonstrated by Capt. Saint, at the Finnish Air Pageant held at Helsingfors from March 20 to 27 this winter, when it "put up a very fine show" and was greatly admired.

As the "Gamecock I" will be familiar to many of our readers, perhaps it may be of assistance to outline briefly the main differences between it and the "Gamecock II." To begin with, the fuselages are almost identical, as are also the wings with the exception that instead of the two top plane halves meeting on the centre-line of the machine, attached to a form of *cabane*, a centre-section has been interposed, supported on struts from the fuselage. This has had the double effect of throwing the two halves of the top plane outwards somewhat, and of very greatly improving the view from the cockpit. As a result of the outward displacement of the top planes, the inter-plane struts have been raked outward, while yet another slight change in the wing arrangement is found in the ailerons, which are of narrower chord in the Mark II machine, and the struts separating them have been moved outward and now occur in the centre of the ailerons.

Structurally the wings have only been changed in so far as the aileron false spars have been supplanted by spars running the whole span of the wing, giving a more rigid support for the ailerons.

The "Gamecock II" has been "cleaned up" by altering slightly the proportions of the petrol tanks carried in the top plane. In the Mark I machine these tanks were fairly narrow from side to side, but projected below the aerofoil section considerably. The new tanks of the Mark II are somewhat wider, but lie more nearly flush with the wing surface, so that the drag of them may be assumed to have been reduced a good

deal. The wind screen of the "Gamecock II" is of a different type from that of the Mark I, and has been found to disturb the air flow over the tail to a much smaller degree. The result has been that the Mark II machine has better control under all conditions.

Of the structural features of the "Gamecock II" there is little which need be said. The methods of construction followed throughout are those employed by the Gloster company for several years. The fuselage is the usual girder type, with ash longerons and spruce struts, braced by tierods, while the wings have spruce spars, struts and ribs, and internal tierod drag bracing, with external streamline wire lift bracing. The new centre-section is, however, made of steel in view of the heavy loads imposed upon it.

The undercarriage is of the oleo-damped type, with rubber rings absorbing landing loads in compression.

The engine installed in the Gloster "Gamecock II," as delivered to the Finnish Air Force is, as, already mentioned, a Gnome-Rhone "Jupiter," normally developing 420 h.p., and a maximum of 454 at 1,800 r.p.m.

The two petrol tanks, carried in the top plane and giving direct gravity feed to the engine, have a capacity of 26 gallons each, while the oil tank, housed in the deck fairing aft of the engine, has a capacity of 5½ gallons.

The load factors to which the "Gamecock II" is designed are 5½ on the rear-wing truss and 7½ on front-wing truss, working to a stress of 5,500 lb./sq. in. for spruce members. The fuselage has a factor of 5½ for front portion, and for rear portion with landing loads. The undercarriage and tail skid have factors of 5.

Provision is made for fitting 2 Vickers guns lying in the sides of the fuselage and firing "through" the propeller by means of the usual synchronising gear. There is space for 1,200 rounds of ammunition, and if desired racks can be fitted to carry 4 bombs weighing 20 lbs. each.

The main dimensions of the "Gamecock II" are shown on the accompanying general arrangement drawings. The following itemised weight data may be of interest:—

Power Unit		
	lb.	kg.
Gnome-Rhone "Jupiter" ..	800	364
Propeller	55	25
Oil (5½ gallons)	55	25
Petrol (52 gallons)	595	291
Piping and exhaust pipes ..	40	18.2
Gas starter, magneto, &c. ..	25	11.35
Total weight of power unit ..	1,570 lb.	734.55 kg.
Structure Weight		
Wings, struts and wires ..	450	205
Fuselage	172	78.2
Gun mounts, &c.	25	11.35
Fins, rudder, tail and elevator	42	19.1
Controls	26	11.8
Tail adjuster	6	2.73
Undercarriage	115	52.3
Tail skid	8	3.64
Fairing, cockpit and seat ..	120	54.5
Main petrol tanks	50	22.7
Oil tank and cooler	18	8.2
Miscellaneous parts	20	9.1
Total structure weight ..	1,052 lb.	478.62 kg.
Military Load		
Pilot	180	82
Electrical equipment	15	6.8
Oxygen	21	9.55
Instruments	26	11.8
Guns, ammunition, sights and		
C.C. gear	190	86.4
Total military load ..	432 lb.	196.55 kg.

Total loaded weight of machine, 3,054 lb. (1,409 kg.).
Wing loading, 11.6 lb./sq. ft. (56.8 kg./sq. m.). Power loading (normal), 7.27 lb./h.p. (3.3 kg./h.p.).

The following performance figures are conservative, based upon the first machine, and have since been considerably improved upon:—

Maximum speed at sea level	150 m.p.h.	233.7 km./h.
" " 10,000 ft.	140 "	221 "
" " 15,000 ft.	135 "	204.6 "
Absolute ceiling,	22,000 ft.	6,770 m.
Stalling speed at sea level,	50 m.p.h.	80.5 km./h.
Climb to 10,000 ft. in 7 mins.; to 15,000 ft. in 12.23 mins.		

NEW FORMULA FOR SPEED CALCULATIONS

A BRIEF reference was made in THE AIRCRAFT ENGINEER last week to the new formula which is to be used for calculating the speed of machines for purposes of handicapping in the King's Cup Race, which is to be flown at Bournemouth on July 30 next. Unfortunately, a printer's error crept into the notes concerning the formula last week, a plus sign having dropped out without the fact being noticed in time for the necessary correction to be made. This occurred in the statement concerning biplanes of unequal span, S_1 and S_2 , the reference to which should have read "For a biplane in which the upper and lower wing spans are unequal, S is taken as $= S_1 + 0.265S_2$, where S_1 is the greater and S_2 the lesser span."

The complete Handicap Speed Formula is as follows:—

$$V^3 = K \times 10^6 \times P/S^2$$

in which V is the handicap speed in miles per hour, K a coefficient the value of which is taken as 12 for all machines with water-cooled engines, P the brake horse-power of the

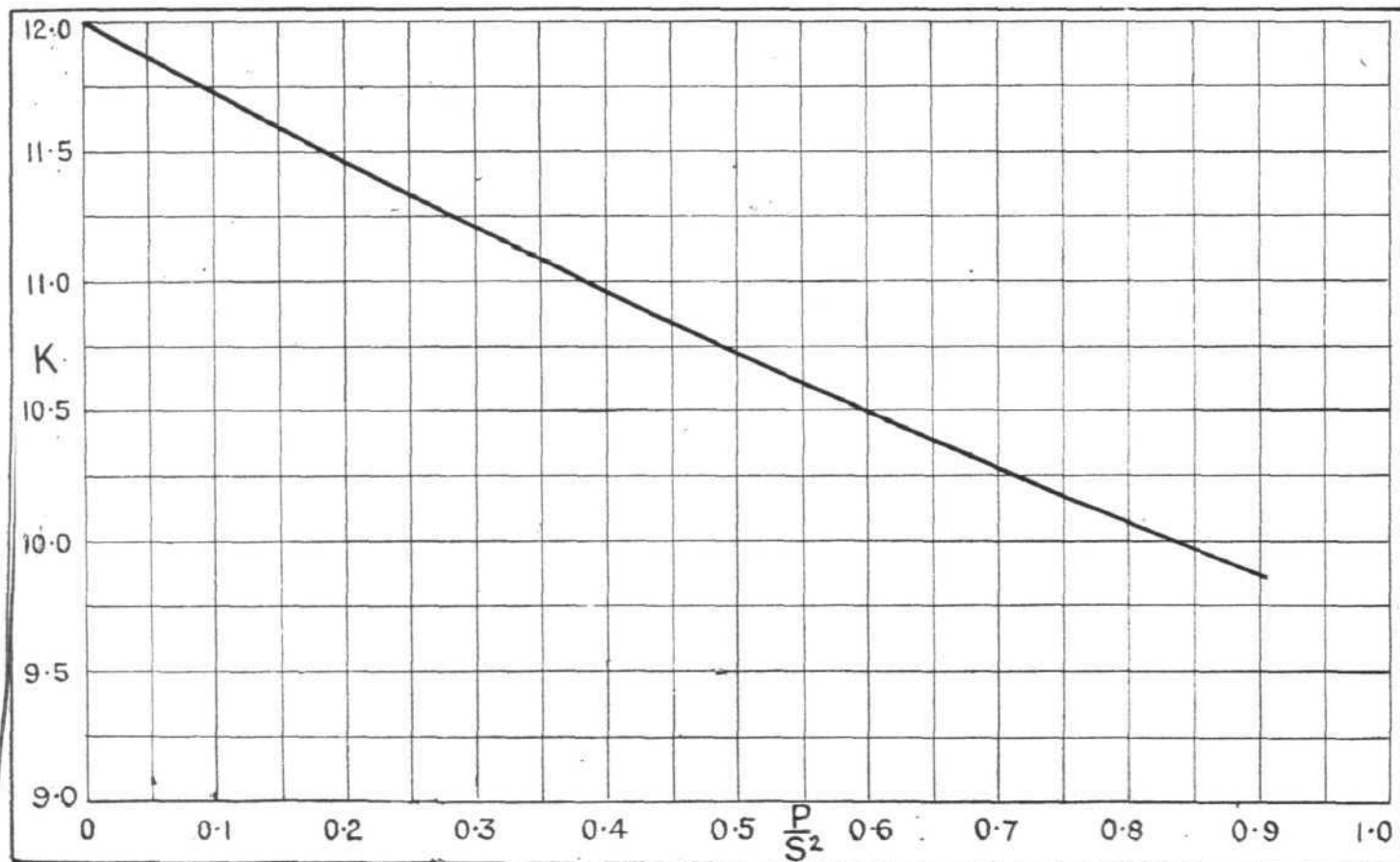
speed from falling off in proportion to the handicap speed given according to the formula, it will be necessary to reduce chord correspondingly, and structural considerations will very quickly put a limit to the extent to which chord reduction can be carried. In a general way, therefore, the formula may be expected to give reasonably close speed estimates.

In order to obtain an idea of what sorts of handicap speeds will obtain, it may be of interest to examine a few typical cases. First of all, let us assume that an equal span biplane of 40 ft. span is fitted with an engine developing 400 h.p. at "maximum permissible revs." The "equivalent span" will be $1.265 \times 40 = 50.6$, and P/S^2 will be 0.156. If the machine is fitted with a water-cooled engine, the value of K will be 12, and the handicap speed will be

$$V^3 = 12 \times 10^6 \times 0.156$$

from which $V = 123.3$ m.p.h.

A similar machine, but fitted with an air-cooled engine, will have a value of K (from curve) of 11.58, and $V^3 = 11.58 \times$



"type" engine at "maximum permissible" revolutions, and S the "equivalent span" in feet.

For a monoplane, the "equivalent span" is simply S . In the case of a biplane with upper and lower wings of equal span, the "equivalent span" is $1.265 \times$ wing span.

For machines fitted with air-cooled engines, the value of K is taken from the accompanying curve. It will be seen that at small values of P/S^2 , or in other words, for machines having a low power in proportion to the wing span, the value of K is not very much lower than the value of 12 taken for all machines fitted with water-cooled engines. When, however, the ratio of power to wing span is high, as in the case of machines with very small wing span and engines of high power, the value of K falls off considerably, the lowest value covered by the curve corresponding to the fastest machines taken into consideration, being about 9.87 at $P/S^2 = 0.9$.

In the formula used last year for handicap purposes, account was taken of wing loading and power loading, or in other words, of "wing-power," as defined by Professor Everling in his article in THE AIRCRAFT ENGINEER of November 25, 1926. This year's formula does not take either wing loading or power loading into consideration, but merely wing span in relation to power, or what we may for want of a better term call "span power."

Since the object of designers will be to get the lowest speed possible (under the handicap rule, of course, and not in reality!), it will pay them to fit wings with large span; but to keep down the wing area, or in other words, to prevent the actual top

$10^6 \times 0.156$, giving $V = 121.8$ m.p.h. Thus, at this value of P/S^2 , the air-cooled is not given the benefit of much lower speed.

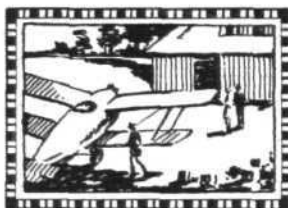
If, however, we take two machines at the "high-speed end," i.e., with very small wing span and high power, the formula comes into operation to a much greater extent. Let us assume that, as before, the power is 400 b.h.p. at "maximum permissible revolutions," but that the span is only 20 ft. In that case the "equivalent span" of an equal-span biplane is $1.265 \times 20 = 25.3$ ft., and $P/S^2 = 0.625$, which gives for a water-cooled engine, $V^3 = 12 \times 10^6 \times 0.625 = 8,500,000$, and $V = 204$ m.p.h.

A similar machine, with air-cooled engine, will have a K (from curve) of 10.44, giving $V^3 = 10.44 \times 10^6 \times 0.625$, or $V = 186.8$ m.p.h. In this case the formula has operated in favour of the machine with the air-cooled engine, which will be handicapped at a speed of about 17 m.p.h. lower than a similar machine with water-cooled engine of same power.

The light 'plane class may be assumed represented by a power of 70 h.p. and a wing span of 30 ft. An equal-span biplane would have an "equivalent span" of 35 ft., and a P/S^2 of 0.057, while its handicap V would be 88.2 m.p.h. for a water-cooled engine, and 87.75 m.p.h. for an air cooled. This small difference in speed is of academic interest only, since there is not likely to be in the King's Cup Race a light 'plane with a water-cooled engine of this low power.

Monoplanes with the same power, and with a wing span of 36 ft., would be handicapped at about 86 m.p.h.

PRIVATE



FLYING

A Section of FLIGHT in the Interests of the Private Owner, Owner-Pilot, and Club Member

PRIVATE FLYING IN AFRICA

By MRS. SOPHIE C. ELIOTT-LYNN

It has been said that necessity is the mother of circumvention, and when one has lived and travelled in East Africa and finds that it takes over twenty hours to go from Nairobi, the capital of the country, to Kisumu, the main port on Lake Victoria Nyanza, which is a distance of 150 miles as the crow flies, it is borne in upon one that something has got to be done about it.

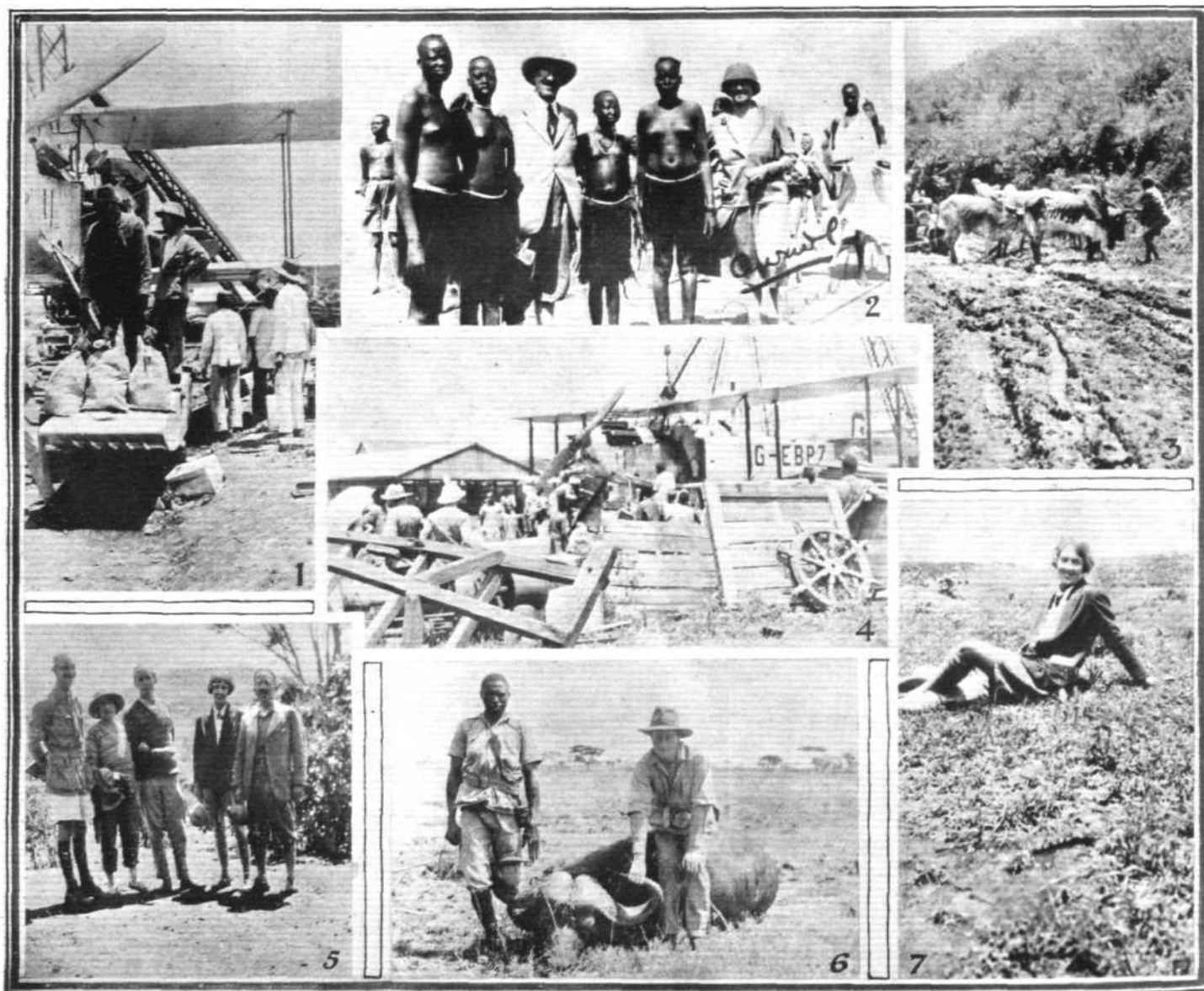
Two people in British East Africa have done that something, and are consequently pioneers in their own direction.

Lord Carbery, who may be remembered as having flown for the Schneider Cup before the war, bought a D.H. 51 machine a couple of years ago, and so became the first really

private-owner in the whole of the dark continent, which is, we think, so called because there is brighter sunlight there than anywhere else!

His example is being followed by Mr. Cavendish Bentinck, Secretary to Sir William Gowers, the Governor of Uganda.

Lord Carbery's is a land machine, but Mr. Cavendish Bentinck has ordered a Blackburn "Bluebird" with floats, so that he can pester about the various ports on Lake Victoria, fly up on to the other lakes which are dotted all about, or fly up the Nile, which has its head waters at Jinja, not very far from the seat of government at Entebbe. Sir William Gowers, the Governor of the Uganda Protectorate, is extra-



FLYING IN AFRICA : Some snapshots brought back to England by Mrs. Elliott-Lynn. 1, Loading mails into the Kisumu-Khartoum machine (Fairey IID). 2, The Director of Civil Aviation, Sir Sefton Brancker, and Miss Auriol Lee, with some slightly-sunburned ladies. 3, The Kisumu-Khartoum Air Line car being "unstuck" by oxen. 4, The Fairey IID being hoisted on to the dock at Kisumu. 5, Africa's first private aeroplane owner. From left to right, General Wheatley, who runs most of the racing in Kenya. Miss Auriol Lee, who was the first woman to fly on the Kenya air route. Lord Carbery, Africa's first private aeroplane owner. Mrs. Elliott-Lynn, and Air Vice-Marshal Sir Sefton Brancker. 6, What the Kisumu-Khartoum air line does in its spare time. Capt. Gladstone, organiser of the route, with a fine buffalo he has just shot. 7, Mrs. Elliott-Lynn.

ordinarily interested in aviation, and it is pretty certain that he will be a frequent passenger with Mr. Cavendish Bentinck. Mr. Cavendish Bentinck is also ordering a land undercarriage which he is going to keep at Kisumu, so that he can change it over and fly up to Nairobi whenever he wants to.

The D.H.51 which Lord Carbery owns, and which is fitted with an "Airdisco" engine, performs extraordinarily well at these altitudes. I had the pleasure of flying this machine at Kisumu, lake level there being 3,700 ft. The engine is just as powerful as is necessary for getting off in a 100 yards space, and the landing speed of the machine is so very low that the needle was right off the indicator, which marked 40 miles an hour, when the machine finally came to earth. She also stunts very nicely, and Lord Carbery caused a great deal of excitement by looping and rolling over the tennis courts the same afternoon. He has never found any trouble whatsoever with the engine, which is looked after by a special mechanic he keeps for it, a German, Herr Taufel.

Lord Carbery, at his estate in Nyeri, has a little private aerodrome, sandwiched between two areas of coffee plantation. This aerodrome is not very much more than 100 yards wide and 200 yards long, and is at an altitude of about 6,000 ft., which speaks well for the performance of the machine.

Lady Carbery is very keen to learn to fly, and is coming home to England this summer for that purpose. She has the privilege of being the first woman, as far as I can make out, to have flown a machine in the whole of Africa, as she occasionally takes control in the air when flying with her husband, who uses "Miss Kenya," as he calls the aeroplane, as we would use a car. He goes to his fishing, his shooting and his tennis in it, and is the envy of all the other people in the Colony.

Kenya is marvellously gifted with forced landing grounds. Mr. Oxley-Boyle, the second pilot of the Air Line, flew Sir Sefton Brancker from Kisumu to Nairobi when he came to visit last February, and he told me afterwards that there was scarcely a mile of the whole of that trip, which climbs over high mountain ranges and wild tracts of undeveloped land, where there was not a really good landing ground within possible reach.

The climate is most wonderful for flying. You know before-

hand when it is going to rain, and the rains are definitely limited to the rainy season. Even then you can fly with safety because you can see the rain storms coming. On a normal day in British East Africa you run the gauntlet of the four seasons. In the early dawn and late at night one has the clear, crisp cold of winter, which merges at noontide into the tropical blaze of sunshine, when the thinnest of muslins are fit wear, while all the houses in the highlands have big log fires at night.

The country, too, is more enthusiastic by far about aviation matters than the mother country. I know of no other country in the world where the doings of the Air Line are given leaders on the front page of the local papers. When Sir Sefton Brancker was in Kenya every smallest word he said about aviation was printed, quoted and repeated dozens of times.

There is a tremendous future for aviation in East Africa, and a private company would find it was undertaking a great financial success, as well as a useful bit of empire building, if it started activities there. Light aeroplanes would be especially useful of the type of the "Bluebird," "Avian," "Moth" or "Widgeon." Thomas Cook and Son, Ltd., have spent a great deal of money in America in advertising conducted tours from Cairo to the Cape, and if a club or small company were in possession of aeroplanes which could do the work, one would find that they were kept very busy by visitors to the country flying over the game reserves and great untouched spaces just for the purpose of seeing the animals.

I came upon one glade among the foot hills of the Aberdares in a Ford car. It is about a mile across and would have formed the most perfect landing ground for even the largest machine. Crouched among the boulders at the edge of this glade I was able to see at the same time no less than eight different kinds of buck feeding in the early light of morning. There were also over 100 zebra grazing peacefully—here and there starting as a wart-hog came grunting past—and in another corner I could see through my glasses two beautiful cheetah strolling lazily along. What a vista for the big game hunter aviation opens up, and what opportunities for pleasure apart from the serious utility of flying!

WIDGEONS AND BLUEBIRDS

It is conceivable that if a foreigner paid a visit to this country today he would return to his country with the strong impression that our national music was "Bye Bye Blackbird" and our only light aeroplane was the "Moth." In defence of this he could produce so much evidence that it would be almost futile to contradict him. He could lead you round the streets of London to all the itinerant musicians and prove that every repertoire contained this song, that in every theatre where musical noises prevailed this song was played, that over the wireless, which was a national entertainment, this song was played; that it was played where the millionaires get their fish and chips—the Savoy. And so with the other. He could say that we inevitably refer to the "Moth" when speaking of writing of light aeroplanes, as we used to of the Ford when referring to cars. Lest this comparison should be misunderstood, we refute any subtle insinuation and clearly indicate that it is a comparison in popularity and not in anything else. Certain terms have their unexpected value. We suggest that you could not pay a man a greater compliment than to declare him as popular as a Ford. Agreed he might not look at it in that light, but if the compliment was paid at a respectable distance that would not matter. It is Mark Twain who tells us of Bermuda, if we remember rightly, that no compliment was greater there than to be called an onion. If you called a man an onion here he would merely consider that you were off your onion. Thus terms have their unexpected meanings, and nobody should jump to hasty conclusions if we compare a "Moth" to a Ford.

There is every sign that it is well within the possibility of becoming the Ford of the air, and we do not think that Capt. de Havilland will mind that. By way of a change, then, we are pleased to note a few facts concerning the existence of two other light aeroplanes. The first is the "Widgeon," which comes from the West, and whose speed at the recent Bournemouth meeting proved to be the best—which is poetry disguised in prose, in case you do not observe it. For three or four years the Westland Works have been experimenting with various types of light aeroplanes, but would not put one on the market until they were quite satisfied that they had a machine very airworthy and capable of hard work. Their "Widgeon III" marks the fulfilment of their ideals at the moment. All complicated and delicate rigging wires have been eliminated, and the wing bracing is effected

by steel tubular struts which need no attention. The fuselage is of semi-monocoque construction, built up of mahogany three-ply in jigs, and cannot get out of true or warp. It has a deep-section monoplane wing. When this is folded the overall dimensions of the machine are only 10 ft. 6 ins. wide by 8 ft. 6 ins. high by 23 ft. long. It is built for two, of course, and has a large luggage locker. It carries sufficient fuel for three and a half to four hours' flight at between 80 and 90 m.p.h. The top speed is well over 100 m.p.h. The cockpits are roomy and draught-free and the seats comfortable, whilst the convenient door entrance is also its feature. Fitted with the "Cirrus" engine it does 20 miles to the gallon of ordinary petrol and uses about a pint of lubricating oil an hour. The price of this latest and most improved model of the "Widgeon" is £750, ready to fly away from the works, complete with tools and airworthiness certificate. Just recently it survived a very severe test. Miss A. J. Bruce, eldest daughter of Mr. and Mrs. Bruce, was married to Maj. L. P. Openshaw, son of Col. and Mrs. Openshaw, and they took their honeymoon in the "Widgeon," which is not the first time a light aeroplane has been subjected to this treatment. Maj. Openshaw is the test pilot to the Westland Aircraft Co. After the wedding at Yeovil the bride and bridegroom walked from the church through an archway of aeroplane ribs, and later drove to the aerodrome, where the latest model "Widgeon III" was awaiting, and in this they flew off to Bournemouth.

The other light aeroplane we are pleased to have something to comment on is the "Blue Bird."

Apparently the exciting and active life of the first model has brought its producers a just reward, for a batch of Blackburn light 'planes are now under construction. It is time that this was so, for no society for the prevention of cruelty to aeroplanes would look favourably on the strenuous life the first model was leading if it went on at the rate it has been going from the beginning of its career. It seems to have been flying ever since it could fly. It has been shot at, and also survived a honeymoon tour carried out by an R.A.F. officer and his bride. Wherever aeroplanes convened a meeting it has popped in and conducted itself admirably. It has the distinction, of course, of side-by-side seating, which is an excellent arrangement considering the specific purpose for which light 'planes seemed to be designed—honeymooning.

FLYING PROCEDURE ABROAD

It is very essential that private owners who contemplate enlarging their range of flight to the Continent should become conversant with the conditions that govern entry and exit to the Continent and follow the alterations in procedure at the various foreign aerodromes as well as our own. At Le Bourget when horizontal visibility is less than 1,000 m. or vertical visibility is less than 100 m. priority in taking off is given to an aeroplane equipped with wireless transmitting apparatus, and this machine acts as a guide. If it finds it impossible to proceed with the flight the pilot must, within twenty minutes from the time of departure, inform the Le Bourget air station of his decision by W/T, or must have landed again at the aerodrome. If this arrangement cannot be followed, an aeroplane not equipped with wireless is allowed to start and it must land again at the aerodrome within twenty minutes from the time of departure if the flight is not being proceeded with. If, at the end of twenty minutes the guiding aeroplane has not returned to the aerodrome and no message has been received, other machines will be allowed to take off in the order arranged by the C.A.T.O. When this arrangement is being followed, machines expected at Le

Bourget will be informed by wireless and those which are not equipped with wireless will be informed by means of large circular ground sheets with the letter B in red on a white ground. One of these is displayed on the signalling area at the Beauvais (-Tille) emergency ground, and the other on that of the Saint-Quentin (-Roupy) emergency ground. Pilots who have to fly out of their course in order to find a clear zone are recommended to bear as far as possible to the right of such a clear zone but to keep at the regulation distance from any officially recognised air route in order to avoid all risk of collision with an aircraft flying in the opposite direction. The Spanish Ministry of Labour has issued a Royal Order which states that foreign aircraft authorised by the Government to fly over the national territory will carry on board the corresponding written permit issued by the authority whom the Ministry of State may appoint. The permit must state the period for which it is granted, the object of the journey and the itinerary, together with the anticipated places of call, the distinguishing mark of the aircraft and the name of the pilot or the person in command.

LIGHT 'PLANE CLUBS

London Aeroplane Club

The flying time for the week ending May 29 was 83 hours, 30 minutes. Pilot Instructors.—Capt. F. G. M. Sparks, and Capt. S. L. F. St. Barbe. Dual Instruction.—H. O. Gugenheim, J. H. Vaisey, G. Black, A. B. Ferguson, I. H. McClure, C. E. Murrell, P. W. Hoare, F. W. R. Martino, F. Clarkson, E. J. B. King, G. H. Mills, E. A. Lingard, C. Miesegae, Capt. H. Spooner, Miss Fletcher, H. Solomon, L. Daniels, G. E. Clair, R. M. S. Veal, A. C. M. Jackman, C. H. Swan, J. G. Crammond, A. J. Richardson, J. J. Hofer, W. Hay, R. Drysdale Smith, A. Southgate, J. C. Elford, J. R. de Havilland, L. W. Gibbens, R. Maurice, G. Lyon.

Solo Flying.—R. Sanders Clark, G. Black, O. J. Tapper, I. H. McClure, C. E. Murrell, J. H. Saffery, Squad-Leader M. E. A. Wright, W. Hay, Major K. M. Beaumont, D.S.O., A. F. Wallace, A. C. Pearson, J. J. Hofer, R. P. Cooper, A. J. Mulder, H. Solomon, G. Merton, Miss O'Brien, R. Malcolm, A. J. Richardson, Major H. A. Petre, D.S.O., W. Roche Kelly, C. H. Swan, D. P. H. Esler.

Passenger Flights.—J. W. Weston, F. S. Boulton, E. D. Elliott, A.G. Stores. Aviator's Certificates.—On Thursday, May 26, 1927, J. J. Hofer and R. P. Cooper passed the tests for their Aviator's Certificates.

Week's Flying.—The flying for the week—83 hrs. 30 mins., is a record and a further record was put up on Sunday, May 29, 1927, when the total flying time for the day was 23 hrs. 35 mins.

Bournemouth Whitsuntide Meeting.—The Club will be represented in the various events by D.H. "Moth" G-EBMF and "Bristol" Brownie G-EBJM. The pilots will be Capt. F. G. M. Sparks, Major H. A. Petre, D.S.O., G. Terrell and Miss O'Brien.

The Hampshire Aeroplane Club

REPORT for week ending May 29. The weather has not been very favourable this week, no flying being possible on three days. The total flying time for the week was 22 hrs. 40 mins.—Instruction flying, 15 hrs. 40 mins.; solo flying, 5 hrs. 25 mins.; joy riding, 1 hr. 10 mins.; test flights, 25 mins.

The following members had instruction:—Major Jenkins, 2 hrs. 10 mins.; Lieut. Cadell, R.N., 2 hrs. 5 mins.; Mr. Mellor, 1 hr. 10 mins.; Doctor Morrison, 50 mins.; Molony, 50 mins.; Chaffey, 45 mins.; G. B. Parker, 40 mins.; Henderson, 40 mins.; Cox, 35 mins.; Captain Molyneux, 35 mins.; A. V. Roe, 30 mins.; Kerry, 30 mins.; Brewster, 30 mins.; Morley, 25 mins.; Heathcote, 20 mins.; E. A. L. Parker, 20 mins.; Bishop 20 mins.; Stokes, 20 mins.; F/O. Southey, 15 mins.; Fortlage, 15 mins.; Deane, 15 mins.; Cripps, 15 mins.; Courtney, 15 mins.; Dickson, 15 mins.; Bound, 15 mins.; Whittle, 10 mins.; Shepherd, 5 mins.; and F/P. Ogilvie-Forbes, 5 mins.

The soloists were F/O. Southey, 1 hr. 15 mins.; K. P. L. Bowen, 45 mins.; E. Wyllie, 35 mins.; Captain Yeatman, 35 mins.; Shepherd, 30 mins.; Deane, 30 mins.; F/Lt. Crawford, 15 mins.; Ash, 10 mins.; F/P. Ogilvie-Forbes, 10 mins.; D. Rumble, 5 mins.; and Cooper, 5 mins.; and a very modest member who objects to seeing his name in this list, 30 mins.

The joy riders were Mrs. Clough, Mrs. Gardener, Mrs. Gibbs, Mr. Gibbs and a cinema photographer from Pathe Freres, all with Captain Thomson and Mr. Pack, with out modest member mentioned among the soloists.

Mr. K. P. L. Bowen successfully carried out all his tests for his "A" licence. It is expected that our membership roll in the pilot grade will reach the figure of 120 within a week or so, after which a waiting list will be inaugurated, and applicants' names will be transferred to the active list as present pupils complete their instruction and are passed out for solo flying.

Lancashire Aero Club

REPORT for week ending May 28.—Total flying time for the week, 37 hrs. 50 mins., made up as follows:—

Dual with Mr. Brown: Messrs. Rowley, 2 hrs. 15 mins.; Harber, 1 hr. 55 mins.; Torres and Miss Emery, 1 hr. 20 mins. each; Allott and Miss Baerlein, 1 hr. 10 mins. each; Shiers, 50 mins.; Leeming and Davison, 40 mins. each; Williamson, 35 mins.; Nelson, Serck and Ruddy, 30 mins. each; Anderson and Stonex, 25 mins. each; Meads, Hartley and Gattrell, 20 mins. each; Ward, 10 mins.

Dual with Mr. Scholes: Messrs. F. Scholes and Nelson, 30 mins. each; Dickinson, 15 mins.

Dual with Mr. Cantrill:—Mr. Benson, 10 mins.

Solo:—Messrs. Costa, 2 hr. 25 mins.; Leeming, 2 hrs. 10 mins.; Fallen, 1 hr. 40 mins.; Twemlow and Chapman, 1 hr. 25 mins. each; Abdalla, 1 hr. 5 mins.; Nelson, 55 mins.; Ward, 50 mins.; Lacayo, 35 mins.; Michelson, 30 mins.; Forshaw, 25 mins.; Crosthwaite, 15 mins.; Benson, Dickinson, Gattrell and Goodfellow, 10 mins. each.

Joy-rides:—With Mr. Twemlow—Messrs. Meades, 1 hr. 45 mins.; Belshaw, 20 mins. With Mr. Lacayo—Mr. Hartley, 1 hr. 10 min. With Mr. Goodfellow—Mrs. Patti, 20 mins; Mr. ap Thomas, 15 mins. With Mr. Leeming—Mr. Sprigg, 25 min. With Mr. Brown—Messrs. Colne and Hartley, 10 mins. each. With Mr. Scholes—Miss Lieely, 10 mins. With Mr. Cantrill—Mr. Thorpe, 10 mins.

Test-flights:—1 hr. 45 mins.

There has been a lack of incident about the week's flying. Mr. Twemlow celebrated his departure to the Isle of Man for the T.T. by putting in 3½ hrs. flying before he went. Owing to engine and machine overhauls coupled with the attitude of our tyrannous finance committee we are not entering any machines for the Newcastle meeting, which is very sad. Sundry trophies of ours are resting in their possession as the result of our last meeting and one would have liked to go and pinch a few of theirs in return. Anyway, here's wishing them a good show.

Midland Aero Club, Ltd.

REPORT for week ending May 28.—The total flying time was 23 hrs. 26 mins. The following members were given dual instruction by Mr. McDonough: F. Coxhill, J. Austin, R. Cazalet, E. P. Lane, R. D. Bednell, H. Smith, C. Fellowes, R. L. Brinton, G. Aldridge, J. C. Rowlands, S. H. Smith.

The following members flew solo: G. V. Perry, J. Brinton, E. J. Brighton, S. H. Smith, H. J. Willis, W. Swann, R. L. Jackson, C. Fellowes.

Passenger flights: Mrs. Willis, N. Crane, J. Ashthorpe, A. Mothley, J. Brewin, H. De Satge.

On Sunday Lord Ossulston and his Moth paid us a visit and on Tuesday Mr. Loader with Mr. Stanhope Sprigg of "Airways." Mr. Loader and Mr. Hubert Broad also paid a visit on a Moth on Saturday.

During the week Mr. S. H. Smith made his first solo and put up a very good performance.

Newcastle-upon-Tyne Aero Club, Ltd.

REPORT for week ending May 29.—Total, 38 hrs. 10 mins. LX 24.30 QV 5.40. D.H.53 RK 8 hrs.

The following members flew under instruction: Mrs. Heslop, Miss Leathart, Messrs. Shaw, Heaton, Wardill, Hayton, Elmes, H. Ellis, Pargeter, George, Jewett, J. Gibson, Wilson, Swann, Bainbridge, Palmer, Rasmussen.

"A" Pilots: Messrs. Mathews, C. Thompson, R. N. Thompson, H. Ellis and Dr. Dixon.

Solo training: Messrs. Bainbridge, Turnbull and Shaw.

Mr. Shaw was launched on Saturday. The working party on the aerodrome thought that it was one of the solo party having a refresher on landings, so Mr. Shaw has reason to be proud of his performance.

Great signs of activity are to be found on the aerodrome as preparations for the flying meeting are now well under way. A notable absentee is the Secretary, who is at present taking a rest. This rest has been forced upon him by a visit to the dentist, but the latest reports say that he will be in his sanctum before the end of the week.

Yorkshire Aeroplane Club

REPORT for the week ending May 28.—Total flying time, 33 hrs. 50 mins.; solo flying, 18 hrs. 20 mins.; dual instruction, 12 hrs. 20 mins.; test flights, 30 mins.; joy rides, 2 hrs. 40 mins.

The following members took instruction with Mr. Beck, Maj. Horley, Dr. Ling, Messrs. Miller, Batcock, Blackburn, Oglesby, B. Dawson, Thompson, Leatham, Watson, Bray, Marshall, Brown, Ambler, Birch, D. Atcherley, Swift, Leech.

The following members flew solo: Messrs. M. B. Lax, Little, Mann, L. S. Dawson, Wood, Batcock, Wilson, Fielden, Henry Leatham, Wayman, Watson, Carter, Norway, D. Atcherley, Leech, R. K. Lax.

On Monday Mr. Beck took one of our machines over to Scarborough, where he was the guest of the Yorkshire Hussars in camp. Refreshed and invigorated, he proceeded to sing for his supper, the Hussars aviating with considerable verve and aplomb. We understand that Lord Grimthorpe and Mr. North will be joining the club in consequence.

On Sunday Mr. Stack arrived on a Moth from Stag Lane in the course of a consumption trial. Mr. Stack's consumption was considerable.

Many thanks to Lancashire for their few kind words in connection with our flying time. We cannot agree, however, that the improvement is solely due to the appointment of Mr. Beck. We are inclined rather to attribute it to the fact that directors, tiring of a prolonged correspondence, had cut their losses recently and ordered a new wheel.

We wish to take this opportunity of apologising publicly to Mr. Mann for certain slurs cast upon his ability as a pilot in connection with his recent flight from Woodford to Sherburn. On Thursday last Mr. Wilson, in the course of his business, had occasion to visit Oxford to collect a Morris-Cowley. He flew down with Mr. Mann, under threat of excommunication if the machine was not returned in time for Saturday's flying. Friday dawned, with mist, rain and low cloud at Oxford. On ringing up Sherburn they were informed that the weather there was fair and balmy. Whereupon they took thought, folded the wings of the Moth, put the tail up on the hood of the Cowley, and set sail for a sunnier clime. At Banbury they paused awhile and, refreshed, were inclined to take a more optimistic view of the flying conditions. Moreover, the sun came out. The omens being favourable they drove the combination into a suitable field, unfolded the Moth, and Mr. Mann flew it back to Sherburn in the very creditable time of two hours. We feel that a pilot of this initiative is hardly deserving of the strictures passed upon him in connection with his previous epic flight.

Personals

Married

Flight-Lieut. R. ALLINGHAM GEORGE, M.C., was married on May 3, at St. Vincent's Church, Caythorpe, to BETTY, second daughter of Mr. and Mrs. REGINALD BALDWIN, Caythorpe, Lincs.

The wedding of SQUADRON-LEADER RALPH TOWLERTON LEATHER and MRS. LILY LAURIE took place at St. Mark's Church, North Audley Street, on Saturday, April 30.

On May 12, at St. Peter's, Eaton Square, Flight-Lieut. CHARLES A. LINDUP, R.A.F. Medical Service, elder son of the late Mr. A. E. Lindup and Mrs. W. Freeman, Avonbank, Sutton, was married to GLADYS, daughter of the late Mr. RAYMOND REFFELL and Mrs. Reffell, of Wraysbury, Bucks.

FRANCIS YORKE-SMITH, A.F.C. (late R.A.F.), of 20, Hertford Street, W., was married, in April, at Christ Church, Down Street, Mayfair, W., to MARISKA JOICEY, of 13, South Audley Street, W., widow of James Joicey, Esq., J.P.

To be Married

The marriage arranged between Mr. HENRY A. ANSON, R.A.F. and Miss SUZANNE ALLEN, will take place at half-past

two o'clock, on June 2, at Holy Trinity Church, Brompton, S.W.

A marriage has been arranged, and will take place early in June, between FLIGHT-LIEUT. G. D. DALY, D.F.C., R.A.F., only son of Maj.-Gen. A. C. Daly, C.B., C.M.G., Baghdad, and Mrs. Daly, and DOROTHY, only child of Mrs. G. L. H. MANBY and the late ALAN TEALE, and step-daughter of Maj. G. L. H. Manby, late the Sherwood Foresters, of Bray, Berks (present address, 54, Boulevard de Verdun, Dieppe).

The engagement is announced between Maj. ARTHUR CLIFFORD HARTLEY, O.B.E. (late R.A.F.), of Glenville, Camberley, Surrey, elder son of the late Dr. and Mrs. G. E. Hartley, of Hull, and NINA, daughter of the late Mr. W. E. HODGSON and of Mrs. Edward Dumoulin, of Ferriby Lodge, North Ferriby, East Yorks.

An engagement is announced between WING-COMMANDER ARTHUR EDWARD PANTER, R.A.F., eldest son of the late Rev. C. E. Panter, M.A., R.N., and MARIE HOWARD KEMPLE, only daughter of Lieut.-Col. J. H. Kemple, O.B.E., and Mrs. Kemple, of Lancefield, Harrow Weald, Middlesex.



At St. James's Palace

HIS MAJESTY THE KING held a Levee on May 30 at St. James's Palace, when the following were amongst those in attendance: Air Marshal Sir John Salmond, Principal Air Aide-de-Camp; Sir Samuel Hoare, Secretary of State for Air; Wing Commander James Bowen, etc. Amongst those presented to His Majesty were: Wing-Commander C. Blount O.B.E., M.C.; Sqdn.-Ldr. N. Bottomley, A.F.C.; Sqd.-Ldr. C. Burge, O.B.E.; Sqdn.-Ldr. J. Costello, M.C.; Air Commodore H. Dowding, C.M.G.; Sqdn.-Ldr. K. Riversdale-Elliott; Sqdn.-Ldr. L. Gould, M.C.; Sqdn.-Ldr. W. Guilfoyle, O.B.E., M.C.; Sqdn.-Ldr. P. Keane; Air Commodore A. Longmore, C.B., D.S.O.; Sqdn.-Ldr. C. Nicholas, D.F.C., A.F.C.; Sqdn.-Ldr. Probyn, D.S.O.; Sqdn.-Ldr. W. Reason; Wing-Commander S. W. Smith, O.B.E.; Wing-Commander E. Sparling, A.F.C., etc.

Royal Air Force Long Distance Flight

THE Air Ministry announces:—Through the courtesy of the Anglo-Persian Oil Company, a message has been received from Flight-Lieuts. Carr and Gillman to the effect that they were forced to descend owing to some technical failure, the definite cause of which the Air Ministry is unable to ascertain until the officers have returned to England and made their

report. S.S. "Donax," which conveyed the officers to Abedan and also rendered all possible assistance, is the property of the Anglo-Persian Oil Company, who have issued instructions to their shipping in the Persian Gulf to endeavour to salve the aeroplane.

The Royal Air Force Cape Flight

JUST before the second Royal Air Force flight from Cairo to the Cape and back was completed, the Napier Company—whose "Lion" engines played so important a part in both last year's and the present flights—produced a little book containing the official report of the first 1926 expedition. This report contains much of considerable interest, and we think the Napier Company have done a wise thing in publishing it in book form, so that it can have a much wider circulation than that which it was possible for the Air Ministry to give when they issued the report. The book itself is excellently produced, and contains many interesting illustrations from photographs taken en route, in addition to two splendid maps—placed on the inner covers of the book—showing the routes taken both on the African and the "Home" or European sections of the flight. We have no hesitation in saying that this book should make a valuable addition to one's aviation library, and all who can should apply to the Napier Company for a copy.



BRITISH AERO ENGINES ABROAD: Our illustration shows the "Atlantida" patrol of Dornier-Wal flying boats, belonging to the Spanish Royal Navy, at Las Palmas (Canary Is.). These flying boats, all of which are fitted with 360 h.p. Rolls-Royce aero engines, are engaged in a flight to Spanish Guiana.

THE BOURNEMOUTH WHITSUN MEETING

97 Entries for Two Days' Racing

THE Bournemouth Whitsun Meeting is being held at the Ensbury Park Racecourse on Saturday, June 4, and Monday, June 6, the racing commencing each day at 2.30 p.m. Below we give a list of the entries for the various events. In connection with the Registration Marks given in the first column, it should be realised that only the last two letters are given, and that on the machines these two letters will be preceded by the letters G-EB; for instance, the ANEC monoplane will carry the letters G-EBJO, the Halton biplane the letters G-EBOO, and so on. The only exception at the Bournemouth Whitsun meeting is the Boulton and Paul P.9, which carries the letters G-EAWS. Since, however, there is no machine at the meeting carrying the letters G-EBWS, there can be no confusion on this score.

Low-Power Handicap. Stakes, £50.—Open to any type of aeroplane the total piston displacement of the power plant of which does not exceed 1,500 c.c. Open to all pilots. Course approximately 10 miles. First prize, £30; Second prize, £15; Third prize, £5, if five or more starters.

Registration Mark	Entrant	Machine and Engine	Colour	Pilot
JO ..	Norman Jones ..	"A.N.E.C. II," Bristol "Cherub III" ..	Brown and Blue ..	Norman Jones.
OO ..	Halton Aero Club ..	Halton I Bristol, "Cherub III" ..	Silver ..	Flight-Lieut. le Poer Trench.
JM ..	London Aeroplane Club ..	Bristol "Brownie," Bristol "Cherub III" ..	Silver ..	Capt. F. G. M. Sparks.
QP ..	R.A.E. Aero Club ..	D.H. 53, Bristol "Cherub III" ..	Silver ..	Flying Officer Mackenzie Richards.
PB ..	Felixstowe Aero Club ..	C.L.A.4, Bristol "Cherub III" ..	Cream and Blue ..	Flight-Lieut. N. Comper.
RA ..	R. P. Cooper ..	D.H.53, Blackburne "Tomtit" ..	Green and Silver ..	R. P. Cooper.

Ladies'. Purse, £35.—Open to any type of Aeroplane. Open to Lady Pilots only. Course approximately 10 miles. First Prize, £20; Second Prize, £10; Third Prize, £5 if four or more starters.

PA ..	Mrs. S. C. Elliott-Lynn ..	S.E.5A, Wolsley "Viper" ..	Silver ..	Mrs. S. C. Elliott-Lynn.
PU ..	The Hon. Lady M. Bailey ..	D.H. "Moth," "Cirrus Mark II" ..	Silver ..	The Hon. Lady M. Bailey.
PR ..	Flight-Lieut. J. Rennison Bell ..	D.H. "Moth," "Cirrus Mark II" ..	Blue ..	Mrs. J. R. Bell.
MF ..	London Aeroplane Club ..	D.H. "Moth," "Cirrus Mark I" ..	Brown and Silver ..	Miss S. O'Brien.
PW ..	R. A. Bruce ..	Westland "Widgeon III," "Cirrus Mark II" ..	Green and Silver ..	Mrs. S. C. Elliott-Lynn.

Private Owners' Handicap. Stakes, £80.—Open to any type of Aeroplane privately owned and registered in the name of an individual. The definition of "privately owned" is at the sole discretion of the Royal Aero Club, who reserve the right to refuse any entries. Open to all Pilots not necessarily the owners of the Aeroplanes. Course approximately 10 miles. First Prize, £50; Second Prize, £20; Third Prize, £10, if six or more starters.

PA ..	Mrs. S. C. Elliott-Lynn ..	S.E.5A, Wolsley "Viper" ..	Silver ..	Mrs. S. C. Elliott-Lynn.
QM ..	Flying Officer A. H. Wheeler ..	S.E.5A, Wolsley "Viper" ..	Silver ..	Flying Officer A. H. Wheeler.
PU ..	The Hon. Lady M. Bailey ..	D.H. "Moth," "Cirrus Mark II" ..	Silver ..	The Hon. Lady M. Bailey.
JO ..	Norman Jones ..	"A.N.E.C. II," Bristol "Cherub III" ..	Brown and Blue ..	Norman Jones.
KD ..	Robert Blackburn ..	Blackburn "Blue Bird," Armstrong-Siddeley "Genet" ..	Light Blue and Silver ..	Sqdn.-Ldr. W. H. Longton.
IQ ..	Air Commodore J. G. Weir ..	D.H. 51 120 h.p. "Airdisco" ..	Blue ..	Col. The Master of Sempill.
NO ..	Capt. G. de Havilland ..	D.H. "Moth," "Cirrus Mark II" ..	Silver and Blue ..	Capt. G. de Havilland.
DO ..	A. S. Butler ..	D.H. 37, 300 h.p. A.D.C. "Nimbus" ..	Maroon ..	Maj. H. Hemming.
OV ..	B. Hinkler ..	Avro "Avian," "Cirrus Mark II" ..	Green and Silver ..	B. Hinkler.
QK ..	K. Hunter ..	S.E.5A, Wolsley "Viper" ..	Blue and Silver ..	Lieut.-Col. G. L. P. Henderson.
RA ..	R. P. Cooper ..	D.H. 53, Blackburne "Tomtit" ..	Green and Silver ..	R. P. Cooper.
OG ..	D. A. N. Watt ..	S.E. 5A, Wolsley "Viper" ..	Khaki ..	D. A. N. Watt.
IY ..	A. F. Scroggs ..	Westland "Wood Pigeon," 45 h.p. "Anzani" ..	Silver ..	A. F. Scroggs.

High-Power Handicap. Stakes, £70.—Open to any type of Aeroplane with engine of 100 h.p. or over. Open to all Pilots. Course approximately 10 miles. First Prize, £40; Second Prize, £20; Third Prize, £10 if six or more starters.

PA ..	Mrs. S. C. Elliott-Lynn ..	S.E.5A, Wolsley "Viper" ..	Silver ..	Mrs. S. C. Elliott-Lynn.
QM ..	Flying Officer A. H. Wheeler ..	S.E.5A, Wolsley "Viper" ..	Silver ..	Flying Officer A. H. Wheeler.
IP ..	Vickers, Ltd. ..	Vickers "Vixen III," 450 h.p. Napier "Lion" ..	Silver ..	Flight-Lieut. Anthony Leach.
WS ..	Capt. J. D. Paul ..	Boulton & Paul P.9, R.A.F.I.A. ..	Silver ..	Squad-Leader C. A. Rea.
IQ ..	Air Commodore J. G. Weir ..	D.H.51, 120 h.p. Airdisco ..	Blue ..	Col. The Master of Sempill.
DO ..	A. S. Butler ..	D.H.37, 300 h.p. A.D.C. "Nimbus" ..	Maroon ..	Major H. Hemming.
QK ..	K. Hunter ..	S.E.5A, Wolsley "Viper" ..	Blue and Silver ..	Lieut.-Col. G. L. P. Henderson.
OG ..	D. A. N. Watt ..	S.E.5A, Wolsley "Viper" ..	Khaki ..	D. A. N. Watt.
IA ..	M. L. Bramson ..	S.E.5A, Wolsley "Viper" ..	Silver ..	M. L. Bramson.

Medium-Power Handicap. Stakes, £100.—Open to any type of Aeroplane fitted with an engine weighing not less than 185 lbs. or more than 285 lbs. Open to all Pilots. Course approximately 10 miles. First Prize, £60; Second Prize, £25; Third Prize, £15 if six or more starters.

PU ..	The Hon. Lady M. Bailey ..	D.H. "Moth," "Cirrus Mark II" ..	Silver ..	The Hon. Lady M. Bailey.
PW ..	Robert A. Bruce ..	Westland "Widgeon III," "Cirrus Mark II" ..	Green and Silver ..	L. P. Openshaw.
KD ..	Robert Blackburn ..	Blackburn "Blue Bird," Armstrong Siddeley "Genet" ..	Light Blue and Silver ..	Squad-Leader W. H. Longton.
QH ..	De Havilland Aircraft Co., Ltd. ..	D.H. "Moth" X, "Cirrus Mark II" ..	Blue and Silver ..	Capt. H. S. Broad.
PR ..	De Havilland Aircraft Co., Ltd. ..	D.H. "Moth," "Cirrus Mark II" ..	Blue ..	Flight-Lieut. S. L. G. Pope.
ND ..	Capt. G. de Havilland ..	D.H. "Moth," "Cirrus Mark II" ..	Silver and Blue ..	Capt. G. de Havilland.
OU ..	De Havilland Aircraft Co., Ltd. ..	D.H. "Moth," Armstrong Siddeley "Genet" ..	Silver and Red ..	Flight-Lieut. d'Arcy A. Greig.
MF ..	London Aeroplane Club ..	D.H. "Moth," Cirrus Mark I" ..	Brown and Silver ..	Capt. F. G. M. Sparks.
OV ..	B. Hinkler ..	Avro "Avian," "Cirrus Mark II" ..	Green and Silver ..	B. Hinkler.
QL ..	A. V. Roe & Co., Ltd. ..	Avro "Avian," "Cirrus Mark II" ..	Blue ..	D. Watt.
QN ..	R.A.E. Aero Club ..	Avro "Avian," "Cirrus Mark II" ..	Silver ..	Flight-Lieut. J. A. Gray.
OI ..	Hampshire Aeroplane Club ..	D.H. "Moth," "Cirrus Mark II" ..	Silver and Dark Blue ..	Flight-Lieut. G. I. Thomson.

Bournemouth Hotels Association Sweepstake. £100.

Registration Mark.	Entrant.	Machine and Engine.	Colour.	Pilot.
PA...	The allocation of machines and pilots to the various hotels and restaurants will be made known on the day of the race.	S.E.5A, Wolseley "Viper"	Silver	Mrs. S. C. Elliott-Lynn.
QM...		S.E. 5A, Wolseley "Viper"	Silver	Flying-Officer A. H. Wheeler.
PU...		D.H. "Moth," "Cirrus Mark II"	Silver	The Hon. Lady M. Bailey.
JO...		"A.N.E.C. II," Bristol "Cherub III"	Brown and Blue	Norman Jones.
PW...		Westland "Widgeon III," "Cirrus Mark II"	Green and Silver	L. P. Openshaw.
IP...		Vickers "Vixen III," 450 h.p. Napier "Lion"	Silver	Flight-Lieut. Anthony Leach.
KD...		Blackburn "Blue Bird," Armstrong-Siddeley "Genet"	Light Blue and Silver	Sqdn.-Ldr. W. H. Longton.
WS...		Boulton and Paul P.9, "R.A.F. 1A"	Silver	Sqdn.-Ldr. C. A. Rea.
OO...		"Halton I," Bristol "Cherub III"	Silver	Flight-Lieut. le Poer Trench.
IQ...		D.H. 51, 120 h.p. "Airdisco"	Blue	Col. the Master of Sempill.
QH...		D.H. "Moth" X, "Cirrus Mark II"	Blue and Silver	Capt. H. S. Broad.
PR...		D.H. "Moth," "Cirrus Mark II"	Blue	Flight-Lieut. S. L. G. Pope.
NO...		D.H. "Moth," "Cirrus Mark II"	Silver and Blue	Capt. G. de Havilland.
OU...		D.H. "Moth," Armstrong-Siddeley "Genet"	Silver and Red	Flight-Lieut. D. d'Arcy A. Greig.
DO...		D.H. 37, 300 h.p. A.D.C. "Nimbus"	Maroon	Major H. Hemming.
MF...		D.H. "Moth," "Cirrus Mark I"	Brown and Silver	Major H. A. Petre.
JM...		Bristol "Brownie," Bristol "Cherub III"	Silver	G. Terrell.
OV...		Avro "Avian," "Cirrus Mark II"	Green and Silver	B. Hinkler.
QL...		Avro "Avian," "Cirrus Mark II"	Blue	D. Watt.
QN...		Avro "Avian," "Cirrus Mark II"	Silver	Flight-Lieut. J. A. Gray.
QP...		D.H.53, Bristol "Cherub III"	Silver	Flying-Officer Mackenzie Richards.
QK...		S.E.5A, Wolseley "Viper"	Blue and Silver	Lieut.-Col. G. L. P. Henderson.
PB...		C.L.A.4, Bristol "Cherub III"	Cream and Blue	Flight-Lieut. N. Comper.
IY...		Westland "Wood Pigeon," 45 h.p. "Anzani"	Silver	A. F. Scroggs.
OI...		D.H. "Moth," "Cirrus Mark II"	Silver and Dark Blue	Flight-Lieut. G. I. Thomson.
IA...		S.E.5A, Wolseley "Viper"	Silver	M. L. Bramson.

Bournemouth and District Business Houses Sweepstake. £180.

Registration Mark.	Entrant.	Machine and Engine.	Colour.	Pilot.
PA...	The allocation of machines and pilots to the various business houses will be made known on the day of the race.	S.E. 5A Wolseley "Viper"	Silver	Mrs. S. C. Elliott-Lynn.
QM...		S.E. 5A Wolseley "Viper"	Silver	Flying-Officer A. H. Wheeler.
PU...		D.H. "Moth," "Cirrus Mark II"	Silver	The Hon. Lady M. Bailey.
JO...		"A.N.E.C. II," Bristol "Cherub IIIA"	Brown and Blue	Norman Jones.
PW...		Westland "Widgeon III," "Cirrus Mark II"	Green and Silver	L. P. Openshaw.
IP...		Vickers "Vixen III," 450 h.p. Napier "Lion"	Silver	Flight-Lieut. Anthony Leach.
KD...		Blackburn "Blue Bird," Armstrong Siddeley "Genet"	Light Blue and Silver	Squad-Leader W. H. Longton.
WS...		Boulton and Paul P. 9, R.A.F. 1A	Silver	Squad-Leader C. A. Rea.
OO...		"Halton I," Bristol "Cherub III"	Silver	Flight-Lieut. le Poer Trench.
IQ...		D.H. 51 120 h.p. "Airdisco"	Blue	Col. The Master of Sempill.
QH...		D.H. "Moth" X, "Cirrus Mark II"	Blue and Silver	Capt. H. S. Broad.
PR...		D.H. "Moth," "Cirrus Mark II"	Blue	Flying-Officer J. Summers.
NO...		D.H. "Moth," "Cirrus Mark II"	Silver and Blue	Capt. G. de Havilland.
OU...		D.H. "Moth," Armstrong Siddeley "Genet"	Silver and Red	Flight-Lieut. D. d'Arcy A. Greig.
DO...		D.H. 37, 300 h.p. A.D.C. "Nimbus"	Maroon	Major H. Hemming.
MF...		D.H. "Moth," "Cirrus Mark I"	Brown and Silver	Major H. A. Petre.
JM...		Bristol "Brownie," Bristol "Cherub III"	Silver	G. Terrell.
OV...		Avro "Avian," "Cirrus Mark II"	Green and Silver	B. Hinkler.
QL...		Avro "Avian," "Cirrus Mark II"	Blue	D. Watt.
QN...		Avro "Avian," "Cirrus Mark II"	Silver	Flight-Lieut. J. A. Gray.
QP...		D.H. 53, Bristol "Cherub III"	Silver	Flying-Officer Mackenzie Richards.
QK...		S.E. 5A Wolseley "Viper"	Blue and Silver	Lieut.-Col. G. L. P. Henderson.
PB...		C.L.A.4, Bristol "Cherub III"	Cream and Blue	Flight-Lieut. N. Comper.
IY...		Westland "Wood Pigeon," 45 h.p. "Anzani"	Silver	A. F. Scroggs.
OI...		D.H. "Moth," "Cirrus Mark II"	Silver and Dark Blue	Flight-Lieut. G. I. Thomson.
IA...		S.E. 5A Wolseley "Viper"	Silver	M. L. Bramson.

ROYAL AIR FORCE DISPLAY

THEIR MAJESTIES THE KING AND QUEEN hope to be present at the Royal Air Force Display at Hendon on Saturday, July 2. Advance booking has already commenced at all ticket agencies, libraries and Air Force Stations. The importance of booking early is urged in view of the greatly increased attendance last year, when 75,000 spectators witnessed the air pageant from within the aerodrome.

The boxes, which seat six, are limited in number. Those near the Royal Enclosure are £7 and £5, others are £4. In the 10s. enclosure a grand stand has been erected to seat 3,000. There is no extra charge for accommodation in the stand this year. Facilities in the 5s. and 2s. enclosures have also been improved. Tickets can also be obtained direct from the Secretary, Royal Air Force Display, Uxbridge.

The programme this year will contain important new features and the number of aircraft taking part has been increased to nearly 200, probably the largest concentration of aeroplanes assembled at any time since the War.

One of the principal new events is a great air battle over Hendon, in which the Home Defence Air Force will carry out the operations. Hostile bombing squadrons will endeavour to attack London from the north and following the receipt of wireless intelligence, fighter squadrons from the

London Defence Station at Hendon will ascend to intercept the raiders. A spectacular battle will ensue, in which the airman, both of attackers and defenders, is full of realism. Several machines will be brought down.

Another event which is certain to make an interesting appeal is musical drill by radio telephony. This is a variation of an old favourite, in which complicated manoeuvres were carried out on telephonic instructions. At this year's Display a series of popular tunes played by the Royal Air Force Central Band and transmitted by wireless will provide the setting to which the aircraft will carry out this musical aerial ride. No. 41 Squadron, which is part of the Home Defence Force, with headquarters at Northolt, has been selected to carry out this new form of jazz.

Negotiations are at present proceeding with the railway managers with the object of arranging cheap fare facilities for the Display from the provinces, and thus widen the circle of those who can witness the principal air gathering of the year. Facilities for motor traffic in the neighbourhood of the aerodrome will be greatly improved as a result of the courteous action of the Middlesex County Council in opening specially for the Display the new Barnet-Watford bye-pass road to points just beyond the entrances to the air station.

Sir Samuel Hoare at Colonial Conference

In an interesting speech at the session of the Colonial Conference on May 19 Sir Samuel Hoare mentioned that it was the British policy to make civil aviation self-supporting at the earliest possible moment, and to give Imperial Airways every incentive to free itself from dependence upon Government subsidies. If a comparison was made between the running expenses of the new types of machine now in

use and those of five years ago it would be found that the running cost per ton mile had been reduced from 4s. 2d. to 1s. 10d. A definite advance had been made in the development of the "air tramp," that was, a heavy draught and comparatively slow machine for the economic transport of freight rather than passengers. He suggested that economics should not only be looked for in the technical field but in the various uses to which machines may be adapted.

AIRISMS FROM THE FOUR WINDS

An Italian Demonstration

THE 12th anniversary of Italy's entry into the war was observed on May 24 as a national holiday, and a demonstration of an air attack on and defence of Rome was given by the Italian Royal Air Force, and was watched by Signor Mussolini from the Palatine Hill.

Strawberries by Air

LARGE consignments of ripe strawberries are now reaching Croydon on the Handley Page Napier air liners from France and Belgium. Germany and Holland are also sending strawberries by air for the London market.

Pinedo's Progress

COLONEL THE MARQUIS DE PINEDO, in his adventurous flight, has successfully accomplished a dangerous part of his route (after certain apprehension on the part of the public), but not in the way he had hoped for. He was towed into Horta, Azores on May 30 by the Italian steamer *Superga*. His Savoia flying boat was slightly damaged at the wing tips and elevator. He proposes to recondition it and has arranged for spare parts and mechanics to come from New York and Naples. He hopes to take off again in about a fortnight, when he will fly back to Flores and thence to Ponta Delgada. After refuelling he will leave for Lisbon. Soon after leaving Trepassey, Newfoundland, last Monday week strong winds reduced the speed of the flying boat considerably, and when about 200 miles from Flores there was not sufficient petrol left to reach land so the Marquis decided to descend in the sea near a schooner which he sighted. He hoped to reach Flores in tow but a gale sprang up and the schooner was unable to make Flores. For three days the Savoia was towed and then it was taken over by the *Superga* which brought it into the Azores at a slow speed in order to avoid damage.

Cherbourg an Air Port

CHERBOURG as an airport has been a subject of long discussion which seemed as though it would never terminate, but at last an aeroplane has departed from there for Paris carrying two passengers from the liner, *Leviathan* and arriving at Paris just about the time the boat train was leaving Cherbourg.

German Air Taxi Services

THE Westphalian Aero Company has introduced an air taxi service in Düsseldorf for business and pleasure purposes. The rate charged is a little over 2s. a mile, and should their ambitious project prove successful other air taxi 'planes of the Focke-Wulff type will be put on.

Prizes for Pacific Flight

MR. J. D. COLE, president of the Hawaiian Pineapple Corporation, has offered £5,000 to the first flier and £2,000 to the second flier to make the non-stop flight from the Pacific coast to Hawaii, which is about 2,400 miles. The flight is to take place in the year ending August 15, 1928.

New Air Service to Le Touquet

To enable Londoners to visit Le Touquet for a night's play in the Casino and to return to London before noon the next day a new service will be opened Thursday, June 2, by the Imperial Airways. The air expresses will leave Croydon at 4.30 p.m., and reach Le Touquet at 5.45 p.m., returning the next day at 10.30 a.m., arriving in London at 11.45 a.m. They will run daily throughout Whitsuntide, and then daily through July and August.

Commander Byrd's Plans

It is said now that after crossing the Atlantic Commander Byrd will undertake an expedition to the South Pole, and for this purpose Dr. Herbert A. Gibbons has arrived in Paris to await Commander Byrd's arrival. He expects to start across the Atlantic as soon as final tests of his machine have been made.

America and Nungesser

In their pride over the feat of their own countryman, Captain Lindbergh, the American people have not forgotten the mystery of Captains Nungesser and Coli's fate, and are still attempting the forlorn search. An expedition led by Mr. Sidney Cotton, who has flown considerably in Newfoundland, is leaving New York to search Newfoundland, and to finance it Mr. Daniel Guggenheim has given £5,000. This generous patron has already given £600,000 for the progress of aviation.

Madrid-Rome Air Service

A NEW and regular air service is to be established between Madrid and Rome, the journey taking about eight hours.

The Königsberg-Memel Service

THE concession granted to the Deutsche Lufthansa by the Lithuanian Government for the operation of the air route Königsberg-Tilsit-Memel has expired, and negotiations are in progress over terms for the renewal of the concession. The Lithuanian Government is anxious that the line should be diverted from Memel to Kovno, which already lies on the air route Königsberg-Moscow. The Lufthansa is inclined to prefer the original line to Memel, though it has been suggested that agreement might be reached if the Lithuanian Government were prepared to grant a subsidy for the new line, analogous to those granted by State and Municipal Governments within the Reich. In the meantime the Lithuanian Government refuses to allow German machines to proceed further than Tilsit, and air communication between Königsberg and Memel ceased abruptly on May 26. This journey by air takes about two hours and by rail about seven.

An Italian Altitude Record?

It is reported that on the Malpensa aviation ground the airman Antonini, flying a Ca 73 Asso aeroplane, climbed to a height of 18,044 ft., carrying a load of two tons, thus beating the French record of 16,367 ft. with a two-ton load made by L. Bossoutrot on a super-Goliath Farman fitted with four Farman 500-h.p. engines, at Le Bourget on November 2, 1925.

R.A.F. "Southampton" Flying to Singapore

THE Air Ministry has decided to send on a 25,000 miles' flight six Supermarine "Southampton" flying boats, an all-metal reconnaissance type produced for the R.A.F. The start will be made from Felixtowe in October, and the course will follow through France, down the Mediterranean, across the Suez Canal to India, of which a circuit will be made, giving demonstrations at various points, thence to Singapore and the Dutch East Indies to Australia. A complete circuit of Australia will also be carried out, and then the fleet of flying boats will return to Singapore, where they will be permanently stationed in the new big air station being built there in connection with the naval base. They will be in the command of Group-Captain T. R. Cave-Brown-Cave. In the hulls there will be room for hammocks to be slung for the benefit of the crews. Two of the fleet will remain at Singapore on the way out, whilst the other four accomplish the Australian extension.

"Huff Daland" now "Keystone"

THE well-known American aircraft constructing firm, Huff Daland Airplanes, Inc., of Bristol, Pa., has changed its corporate name to the "Keystone Aircraft Corporation," but will carry on business as usual at the same address.

Observations Above the Clouds

ARRANGEMENTS are being made for the benefit of scientists and others who wish to observe the eclipse of the sun on June 29 to send up Handley-Page Napier air liners of the Imperial Airways fleet. They will leave London on the afternoon of June 28 and fly to an aerodrome near Chester, and on the following morning they will climb to a suitable height for observation and remain up until the eclipse is over.

"Air Force Songs and Verses"

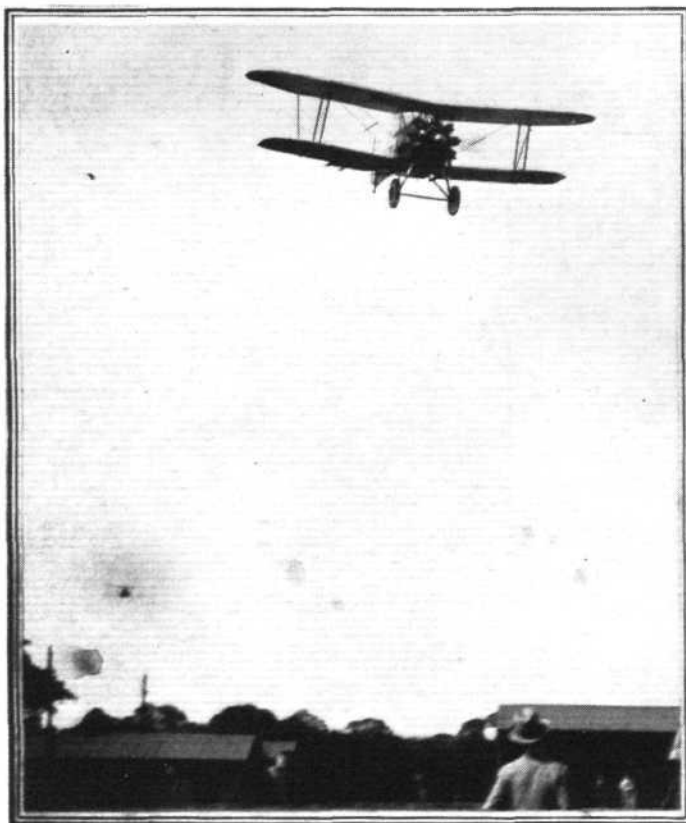
THIS is an amusing collection of the songs and verses about the R.A.F., mostly caricaturing life in the Service during the war, and particularly air fighting with the Hun. The rhyming style is effectively used almost throughout, which is a condition that most of us demand before we ever tackle poetry. The reviewer's personal partiality fell to the Home "Hun" and others that followed were "The Pessimist and the Optimist" and "The Young Aviator." Included in the collection are the songs of 54 Squadron which have been published before. The proceeds from the sales of this little book are to go to the R.A.F. Memorial Fund, which hopes to benefit by a substantial sum for their general purposes. We can recommend this collection to all who are followers of aviation, whether past or present members of the R.A.F. or otherwise. The price is 2s. per copy, post free, obtainable from the R.A.F. Memorial Fund, 7, Iddesleigh House, Caxton Street, Westminster, S.W.1.

RACE FOR THE FIGHTER SQUADRONS

THE Under-Secretary of State for Air, Sir Philip Sassoon, has presented a cup to be competed for by the fighter squadrons of Air Defences. The conditions this year were a race of approximately 100 miles, each of the squadrons being represented by one machine. The machines were handicapped according to type. Each machine was to fly carrying ordinary service equipment but without such accessories as bomb-rack and radio telephony gear. Competitors had to climb at once to 2,000 ft. and were not allowed to fly below that altitude until they dived for the finishing line.

The race was held on May 26 with start and finish at Northolt aerodrome. The weather was perfect with a very light north-east breeze which scarcely filled the "stocking" at Northolt. The course was Northolt, Duxford, Halton, Northolt. Nine squadrons entered machines which are given on page 363 grouped in types.

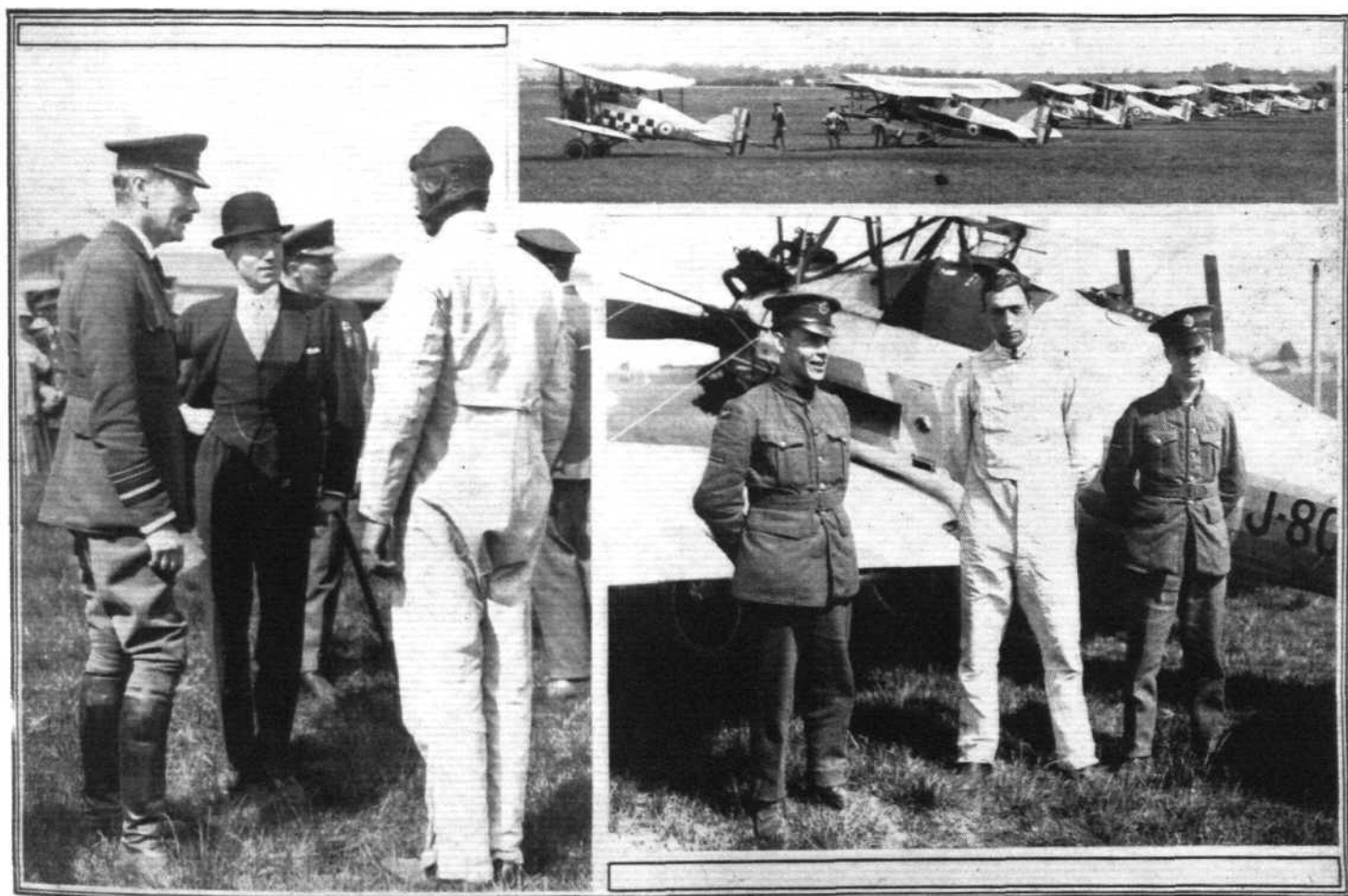
Sir Philip Sassoon, Air Vice-



Marshal Brooke-Popham, Commanding Fighting Area, and numerous senior officers were present.

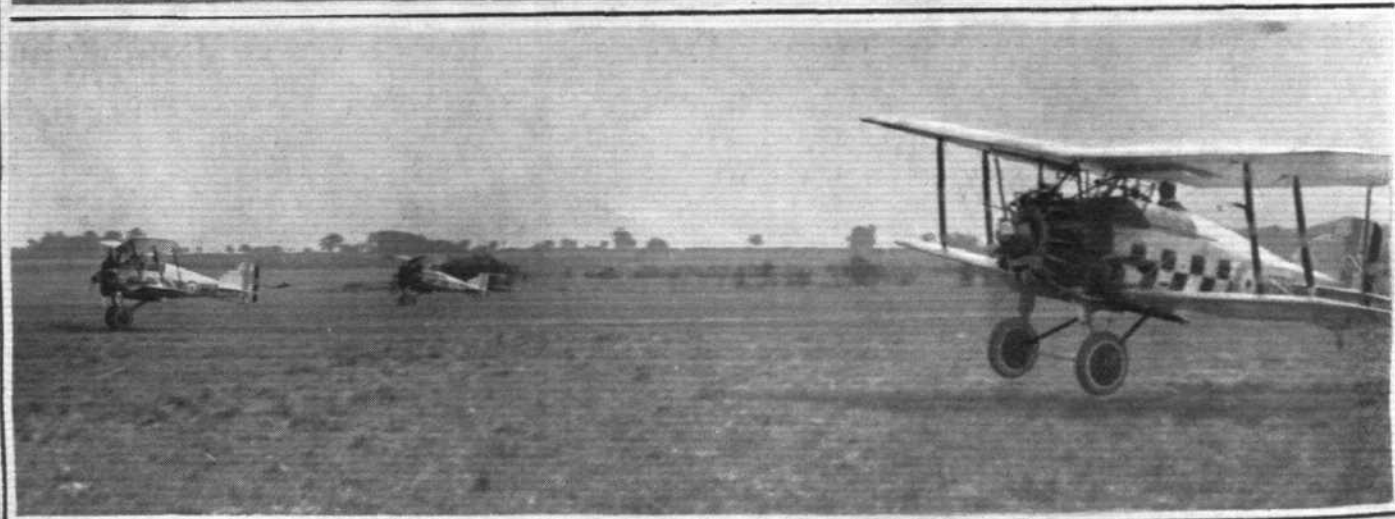
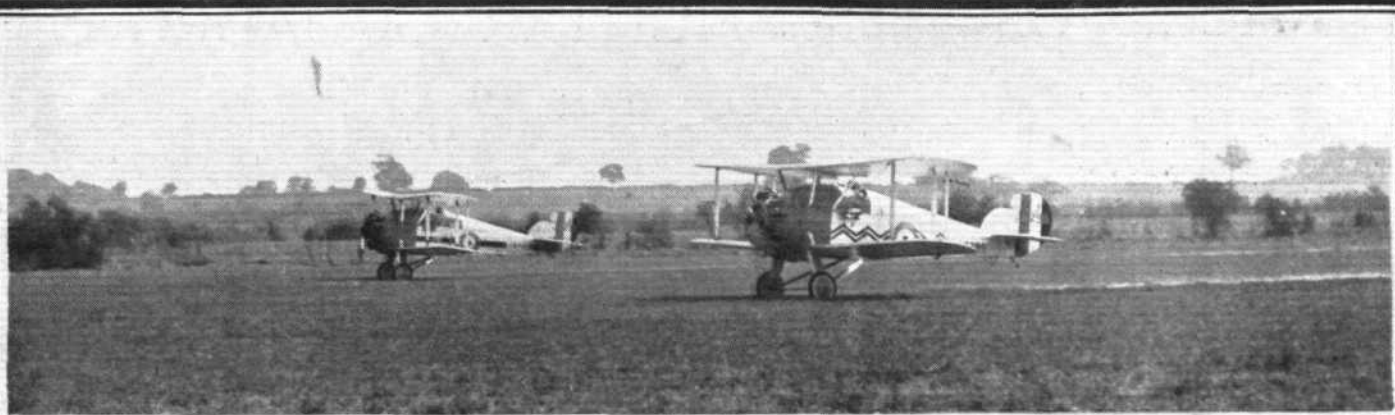
The Gamecocks started scratch; the Grebes received 1 min. 14 secs.; the Siskin 2 mins. 57 secs., and the Woodcocks 3 mins. 33 secs. Performance figures of service aircraft are rarely published and members of the public who wish to take an intelligent interest in the equipment of the Royal Air Force do not find it easy to do so. These handicaps will give them some enlightenment; but it should be borne in mind that certain squadrons specialize on night-flying, which affects their racing speed. Pilots who have to go up to meet night raiders find good climb more useful than high speed.

The handicapping proved most successful, despite the fact that all the Gamecocks more than caught their handicap. The three of them came in together with but fractions of seconds separating them. But the next four machines,

















["FLIGHT" Photographs

WINNER OF THE SIR PHILIP SASSOON CUP: The upper photo shows Pilot-Officer A. H. Montgomery, of 32 Squadron, Kenley, crossing the finishing line in a Gloster "Gamecock" with Bristol "Jupiter" engine as winner of the race. Below, on the left, Air Marshal Sir John M. Salmond, Air Officer Commanding-in-Chief, Air Defences of Great Britain, and Sir Philip Sassoon, Under-Secretary of State for Air, congratulating Pilot-Officer Montgomery on his victory in the race for the Sassoon Cup. On the right, P/O Montgomery and his fitter and rigger, Leading Aircraftmen Jenkins and Price. Inset, the machines lined up for the start.



THE SIR PHILIP SASSOON CUP RACE AT NORTHOLT : The machines are here shown starting for the race, the order being : Two Hawker " Woodcocks," an Armstrong-Whitworth " Siskin 3A," three Gloster " Grebes " and three Gloster " Gamecocks."

[" FLIGHT " Photographs

NO.	STATION	PILOT	SQUADRON MARKING ON MACHINES
GAMECOCK - JUPITER VI			
32	KENLEY	F/O. A.H. Montgomery	
43	TANGMERE	F/Lieut A.C. Collier	
23	KENLEY	F/O. A.W.B. M ^c Donald	
GREBE - JAGUAR			
19	DUXFORD	F/O. P.P. Grey	
25	HAWKINGE	F/O. L.E. Maynard	
29	DUXFORD	F/O. W.A. Tattersall	
SISKIN 3A - JAGUAR (Supercharged)			
41	NORTHOLT	F/O. H.T. Andrews	
WOODCOCK - JUPITER IV			
3	UPAVON	F/O. P. Cranswick M.C.	
17	UPAVON	F/Lieut. F.L. Pearce	
 Black  White  Blue  Red  Green			

THE SIR PHILIP SASSOON CUP : Table of entrants for the final of the race for this cup, flown at Northolt last week, showing the various squadron markings painted on the machines. From these the identity of machines illustrated in our photographs may be ascertained.

namely, the Siskin, a Woodcock, and two Grebes were very close behind, and it was certainly a very good finish. The winner was Flying Officer A. H. Montgomery of No. 32 Fighter Squadron from Kenley. The complete order of finishing was:—

No. 32	Gamecock.
" 43	Gamecock.
" 23	Gamecock.
" 41	Siskin.
" 3	Woodcock.
" 25	Grebe.

No. 19	Grebe.
" 17	Woodcock.
" 29	Grebe.

Flying-Officer Montgomery completed the course in 42 mins. 27 secs. at an average speed of 156 m.p.h. The Siskin made a speed of 142 m.p.h., the first of the Woodcocks 139 m.p.h., and the leading Grebe 136 m.p.h. The winner will give a special demonstration at the Royal Air Force Display on July 2.

F. A. DE V. R.

THE ROYAL AIR FORCE

London Gazette, May 24, 1927

General Duties Branch

G. P. Macdonald is granted a short-service commn. as a Flying Officer with effect from and with seniority of May 9: Pilot Officer R. Costa is promoted to rank of Flying Officer (April 29); Pilot Officer on probation H. C. Kelly is confirmed in rank (May 4); Sqdn.-Leader W. G. Sitwell, D.S.C., is placed on retired list on account of ill-health, and is granted permission to retain rank of Wing Commander (May 25).

The following Flying Officers are transferred to Reserve, Class C, on the dates indicated:—A. W. Crees (May 25); F. B. Young (May 26). Flying Officer R. H. S. Teek (Lieut., R.M.), relinquishes his temp. commn. on return to Royal Marines duty (May 4).

Stores Branch

Pilot Officer E. J. Fishenden is promoted to rank of Flying Officer (May 10).

Medical Branch

Flight-Lieut. C. G. J. Nicholls, M.B., is granted a permanent commn.

in this rank (May 25); Flying Officer P. D. Barling, M.B., is promoted to rank of Flight-Lieut. (May 25).

Memorandum

Flying Officer J. M. Morris relinquishes his temp. commn. on ceasing to be employed as a Flying Officer (Works and Buildings Directorate) (April 18).

Reserve of Air Force Officers

H. Spooner is granted a commn. in the General Duties Branch, Class AA, as a Pilot Officer on probation (May 9); Flying Officer F. J. E. Feeny, D.S.O., is transferred from Class C to Class A (May 6); Flying Officer H. G. Harper is transferred from Class A to Class C (April 9); Flying Officer G. P. Macdonald resigns his commn. (May 9).

AUXILIARY AIR FORCE

General Duties Branch

No. 602 City of Glasgow (Bombing) Squadron.—Sqdn.-Leader J. D. Latta, M.C., resigns his commn. (May 6). To be Sqdn.-Leader—J. Fullerton, to command the Squadron (May 6).

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Squadron-Leaders: G. S. M. Insall, V.C., M.C., to No. 70 Sqdn., Iraq; 25.4.27. J. K. Summers, M.C., to No. 45 Sqdn., Egypt; 25.4.27. W. D. Budgen, O.B.E., to R.A.F. Depot, Uxbridge; 1.5.27.

Flight-Lieutenants: F. H. Laurence, M.C., to No. 20 Sqdn., India; 19.4.27. C. A. Stevens, M.C., to H.Q., India; 19.4.27. H. C. Pyper, to R.A.F. Depot, Uxbridge; 22.4.27. F. O. Soden, D.F.C., to Central Flying Sch., Wittering; 6.5.27. W. R. Cox, M.C., A.F.C., to No. 605 County of Warwick Sqdn., Castle Bromwich; 12.5.27. E. I. Bussell, to No. 503 Sqdn., Waddington; 10.5.27. J. P. Lawson, A.F.C., to H.Q., Iraq; 15.4.27.

Flying Officers: J. V. Kelly, J. W. New and Y. W. Burnett, to No. 45 Sqdn., Egypt; 25.4.27. M. H. Jenks, to No. 208 Sqdn., Egypt; 27.4.27. A. J. Thompson, to No. 2 Armoured Car Coy., Palestine; 2.5.27. D. Robinson, to No. 6 Sqdn., Iraq; 8.4.27. H. Walker, to No. 58 Sqdn., Worthy Down; 10.5.27. (Hon. Flight-Lieut.) U. C. de Burgh, to No. 84 Sqdn., Iraq; 3.5.27. G. I. C. Peacocke, to Aircraft Depot, India; 20.4.27. H. L. Drake, to Aircraft Park, India; 20.4.27.

Pilot Officers: N. R. Buckle, to No. 11 Sqdn., Netheravon; 12.5.27. A. P. de Wouff de Wytt, to No. 5 Sqdn., India; 14.4.27.

Pilot Officers: J. Barton, to R.A.F. Depot, Uxbridge, 11.4.27. C. D. G. Welch, to Aircraft Depot, India, 16.3.27. G. L. G. Richmond, to No. 58 Sqdn., Worthy Down, 16.5.27. V. O. Blackden, to No. 16 Sqdn., Old Sarum, 10.5.27.

Group Captain H. M. Cave-Browne-Cave, D.S.O., D.F.C., to Far East Flight, Felixstowe, to command, 17.5.27.

Wing Commander E. R. C. Nanson, D.S.C., A.F.C., to R.A.F. Base and Stores Depot, Iraq, to command, 1.5.27.

Squadron Leaders: G. E. Livock, D.F.C., to Far East Flight, Felixstowe, 17.5.27. C. L. Scott, D.S.C., to Marine Aircraft Experimental Estab., Felixstowe, 9.5.27.

Flight Lieutenants: J. C. M. Hay, to R.A.F. Base, Calshot, 27.5.27. P. E. Maitland, A.F.C., S. T. Freeman, M.B.E., D. V. Carnegie, A.F.C., C. G. Wigglesworth, A.F.C., and H. G. Sawyer, A.F.C., to Far East Flight, Felixstowe, 17.5.27. R. E. G. Fulljames, M.C., to No. 1 Sch. of Tech. Training (Apprentices), Halton, 23.5.27. H. Hackney, to No. 480 Flight, Calshot, 2.5.27. W. E. Stanton, M.C., D.F.C., to R.A.F. Base, Calshot, 11.5.27.

IN PARLIAMENT

Cape-Cairo Air Service Landing Grounds

MR. VIANI, on May 18, asked the Secretary of State for Air whether he can state the original cost of acquiring, clearing and preparing the landing places between Cairo and the Cape for the flight of Sir Pierre van Ryneveld in 1920; the cost of clearing and provisioning these landing grounds for the Cairo-Cape flights of 1926; and the cost of maintenance of these grounds?

Sir S. Hoare: The answer to the first part of the question is that the cost of the opening up of the landing grounds on this route for Sir Pierre van Ryneveld's first flight over it was approximately £55,000; to the second part that the cost of reconditioning the grounds and transport of ground parties for the 1926 flight was about £3,000. As regards the last part, the only maintenance charge borne on Air Votes is an annual contribution of approximately £300 to the Sudanese Government towards the maintenance of landing grounds in the Sudan which are occasionally required for the Royal Air Force.

Lieut.-Comdr. Kenworthy: Would it not be very much better to keep these landing grounds continually in good condition, so that at any time we can start the air mails from the Cape to Cairo?

Sir S. Hoare: That is exactly what we are attempting to do. The fact that the reconditioning of the landing grounds has cost less than one-tenth of the original sum shows that we are going a good long way in that direction.

Flying Trains

COL. DAY asked the Secretary of State for Air if his attention has been called to the experiments that have recently taken place in Germany with what is known in that country as flying trains, consisting of a power-driven aeroplane to which a glider is attached; and whether it is proposed to carry out any such experiments in this country?

Sir S. Hoare: The experiments referred to have been considered in the light of details given in the Press, but beyond demonstrating the principle they have I think, no practical application to which I should be justified in allocating research funds. The progress of such experiments will, however, be watched.

Imperial Airways

MR. VIANI asked the rental paid to the Exchequer by the Imperial Airways, Limited, for the use of the aerodrome and landing ground at Croydon and Lympne, and if the sum is inclusive of rate; if the hotel at Croydon for which a licence was applied for by the Air Ministry, and granted by the local licensing authority, will be rented by Imperial Airways, Limited, or be retained as a Ministry concern; or, if it is intended to be rented by Imperial Airways, Limited, what is the rental agreed upon?

Sir S. Hoare: As regards the first part of the question, the amount paid by Imperial Airways, Limited, for the rent of buildings and for housing and landing fees for aircraft at Croydon Aerodrome for the 12 months ended March 31, 1927, was £3,744; this sum was exclusive of rates. Housing and landing charges were paid by the company at Lympne for the same period to the amount of £202. As regards the second part, the hotel at Croydon will be in the hands neither of Imperial Airways nor of the Air Ministry; it is to be built and conducted as a private undertaking by Messrs. Barclay, Perkins and Co., Ltd. The last part of the question does not, therefore, arise.

Civil Aeroplanes and Floats

Sir ROBERT THOMAS, on May 19, asked the Secretary of State for Air whether there are any regulations requiring all civilian aeroplanes plying for public hire on routes involving passage over the sea to be fitted with floats to ensure safety in case of a forced descent on to the water?

Sir S. Hoare: The answer is in the negative. There is, however, a regulation which requires that a life-belt for each person on board shall be carried by aircraft engaged on flights at any point of which they are more than 10 miles from the nearest land.

Captain Garro-Jones: Has the right hon. Gentleman considered the desirability of enforcing the provision of a fuselage that might float for a certain time? Is that considered to be a practicable policy?

Sir S. Hoare: There are technical difficulties, obviously, in the way of a proposal of that kind. I am satisfied that all reasonable precautions are taken.

Sale of Boats (Iraq)

Sir FREDERIC WISE asked the Secretary of State for Air if the boats and steamers in connection with the Air Force, &c., in Iraq have been sold?

The Under-Secretary of State for Air (Sir Philip Sassoon): Yes, Sir; an offer has now been accepted for the vessels which were available for sale.

Air Mails

Sir WILLIAM DAVISON asked the Postmaster-General whether he is aware of the general ignorance on the part of the public with regard to facilities for sending letters by air; whether he will take steps to make these facilities more generally known; and whether he will consider the provision for sale to the public of special envelopes to permit of the more rapid handling by sorters at the Post Office of letters intended to be transmitted by air?

Sir W. Mitchell-Thomson: Air Mail services receive a considerable measure of publicity. A special Air Mail showcard is displayed at more than 1,000 Post Offices. An Air Mail Leaflet—a new edition of which will be issued shortly—is distributed free to applicants at all head and branch post offices; and notice of any alteration or improvement is given in the newspapers and in the Post Office Daily List. The official blue Air Mail label, issued free of charge, is considered to be more suitable for the purpose of distinguishing letters intended for transmission by air than the provision of special envelopes.

Sir W. Davison: Is the right hon. Gentleman aware of the success which has attended the adoption of the suggestion contained in the latter part of the question in America as regards the issue of special envelopes for the air mails?

Sir W. Mitchell-Thomson: Yes, but we think the blue label is better.

Cairo-Karachi Air Mail Line

Lieut.-Commander KENWORTHY, on May 25, asked the Secretary of State for Air whether the Cairo-Karachi air mail line is still suspended; whether an alternative route is being considered which will not pass over Persian territory; and, if so, which route is under consideration?

Sir P. Sassoon: As regards the first part of the question, the Cairo-Basrah section of the route is in full operation, but the operation of the Basrah-Karachi section is still suspended. As regards the remainder of the question, a route which follows the Arabian coast of the Persian Gulf and runs thence via Baluchistan to Karachi is under consideration.

Aero Golfing Society

THE Spring Meeting of the Aero Golfing Society was held at Addington on May 19. The Spring Challenge Cup presented by FLIGHT was won by Mr. T. Instone—85 less 17 = 68. The best ball bogey was won by Hilary Taylor and A. G. Hazell—10 up.

SOCIETY OF MODEL AERONAUTICAL ENGINEERS

S.M.A.E.

THE above society has so far this season held three flying meetings, as follows:—

Saturday, April 9, Hendon aerodrome. Gamage Cup competition. Open to any type of machine for duration only. Rain, unfortunately, prevented good performances, although it did not damp the enthusiasm of a large number of members and friends, including representatives of the Halton Model Aircraft Society, now affiliated to the S.M.A.E. The result was:—

- | | |
|---------------------------------|--------------------|
| (1) Mr. Paveley (twin pusher) | average 60.6 secs. |
| (2) Mr. Rasmussen (twin pusher) | " 52.2 secs. |
| (3) Mr. Bullock (twin pusher) | " 28.6 secs. |

Saturday, May 7, K. and M.A.A., at Wimbledon Common, for longest distance flight by a fuselage model. A strong N.W. wind was rather distressing; nevertheless, the flying was good. The result remained undecided between Mr. Newell and Mr. Plater, who agreed to compete again for first place at a later date. Mr. Rasmussen secured third place.

Saturday, May 21, Pilcher Cup for Fuselage Gliders. Weather again interfered, there being a strong following wind, so that performances were not as good as expected. The result was as follows:—

- | | |
|-------------------|--------------------|
| (1) Mr. Jackson | 26 secs. |
| (2) Mr. Johnson | 14.2 secs. |
| (3) Mr. Rasmussen | 11.2 secs. |

Forthcoming competitions are:—

Saturday, June 4: Sir John Shelley Cup, Wimbledon Common, for autogyros.

Saturday, June 18: Single-screw Farman competition, at Sudbury.

Saturday, June 25: Farrow Shield Inter-Club competition at Halton.

Members are reminded that permission has been again obtained for use of part of Hendon Aerodrome at any time.

S. H. F. CROUCH,

Hon. Secretary

SIDEWINDS

WE are informed by Mr. F. J. Cleveland, Patent Agent and Consulting Engineer that he has voluntarily given up his position as Chief Technical Assistant to J. S. Withers and Spooner, and has opened an office at Bank Chambers, 29, Southampton Buildings, Chancery Lane, W.C.2, under the name of F. J. Cleveland and Co.

It may be of interest to note in connection with the first light aeroplane record established on May 18, when Mrs. Elliott-Lynn ascended to 16,000 ft. in an Avro "Avian" fitted with a "Cirrus Mark II," that "K.L.G." plugs were used. Thus, these plugs are continuing their association with big aviation events into this new sphere from the very commencement.

AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.e. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.)

APPLIED FOR IN 1926

Published June 2, 1927

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|--------|--------------------------|--|
| 3,472. | H. LEITNER. | Metal screw-propellers. (270,402.) |
| 6,413. | R. ALKAN and G. LESOURD. | Apparatus for bombarding from aircraft. (248,776.) |

APPLIED FOR IN 1927

Published June 2, 1927

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|--------|----------------------------------|-----------------------------|
| 1,301. | ROHRBACH-METALL-FLUGZEUGBAU GES. | Flying machines. (264,531.) |
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